CHC-CL1/CL3

SERVICE MANUAL

Ver 1.0 2001. 03

US Model
Australian Model
CHC-CL1
AEP Model
UK Model
E Model
CHC-CL1/CL3

- CHC-CL1/CL3 are composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to them.

COMPONENT MODEL NAME

	CHC-CL1	CHC-CL3
COMPACT DISC DECK RECEIVER SYSTEM	HCD-CL1	HCD-CL3
FRONT SPEAKER SYSTEM	SS-SCL1 (SILVER) SS-SCL1B (BLACK)	SS-SCL3

• Abbreviation
MX : Mexican model
AUS : Australian model
KR : Korea model
TW : Taiwan model

SPECIFICATIONS

General

Power requirements
U.S.A. model: 120 V AC, 60 Hz
AEP models: 230 V AC, 50/60 Hz
Australian and New Zealand models: 230 – 240 V AC, 50/60 Hz
Mexican model: 120 V AC, 60 Hz
Korean model: 220 V AC, 60 Hz
Other models: 120 V, 220 V, 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector

Power consumption
U.S.A. model:
CHC-CL1: 100 watts
AEP models:
CHC-CL3: 165 watts
CHC-CL1: 100 watts
CHC-CL3/CL1: 0.5 watts (at the Power Saving Mode)
Other models:
CHC-CL3: 165 watts
CHC-CL1: 100 watts

Dimensions (w/h/d) incl. projecting parts and controls
Amplifier/Tuner/Tape/CD section: Approx. 215 × 285 × 421 mm
Speaker: Approx. 210 × 285 × 260 mm

Mass
Amplifier/Tuner/Tape/CD section:
CHC-CL3: Approx. 8.0 kg
CHC-CL1: Approx. 7.7 kg
Speakers: Approx. 3.8 kg net per speaker

Supplied accessories: Remote (1)
R6 (size AA) batteries (2)
AM loop antenna (1)
FM lead antenna (1)
Speaker pads (8)

Design and specifications are subject to change without notice.

PARTS LIST

Part No.	Description	Remark
	ACCESSORIES & PACKING MATERIALS	
	**********	
1-476-443-11	COMMANDER, STANDARD (RM-SCL1)	
1-501-374-11	ANTENNA, LOOP (AM)	
1-501-659-41	ANTENNA (FM) (CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)	
1-501-804-11	ANTENNA (FM) (CL1:AEP,UK/CL3:AEP,UK)	
4-210-254-01	CUSHION (FOOT)	
4-228-952-01	COVER,BATTERY (FOR RM-SCL1)	
4-233-430-11	MANUAL, INSTRUCTION (CL1:US,AEP,UK,AUS,E,TW/CL3:AEP,UK)	(ENGLISH)
4-233-430-21	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(FRENCH)
4-233-430-31	MANUAL, INSTRUCTION (CL1:AEP,E,MX/CL3:AEP,MX)	(SPANISH)
4-233-430-41	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(GERMAN, DUTCH, ITALIAN)
4-233-430-51	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(SWEDISH, POLISH)
4-233-430-61	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(PORTUGUESE)
4-233-430-71	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(DANISH, FINNISH)
4-233-430-81	MANUAL, INSTRUCTION (CL1:AEP/CL3:AEP)	(RUSSIAN)
4-233-430-91	MANUAL, INSTRUCTION (CL1:TW)	(CHINESE)
4-233-431-11	MANUAL, INSTRUCTION (CL1:KR/CL3:KR)	(KOREAN)

COMPACT Hi-Fi COMPONENT SYSTEM

9-873-859-11
2001C1600-1
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Sony Corporation
Audio Entertainment Group
General Engineering Dept.

SONY®

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.03	New

HCD-CL1/CL3

SERVICE MANUAL

Ver 1.0 2001. 03

Photo : HCD-CL1

US Model
Australian Model
HCD-CL1
AEP Model
UK Model
E Model
HCD-CL1/CL3

This set is the tuner, deck, CD and amplifier section in CHC-CL1/CL3.

This stereo system is equipped with the Dolby* B-type noise reduction system.
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⊡⊡ are trademarks of the Dolby Laboratories Licensing Corporation.

CD SECTION	Model Name Using Similar Mechanism	HCD-DX50
	CD Mechanism Type	CDM63B
	Base Unit Type	BU-30BD60
	Optical Pick-up Type	A-MAX.3
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-CL5MD
	Tape Transport Mechanism Type	TCM-230ASR41CL

SPECIFICATIONS

Amplifier section

For the U.S. model

AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6-ohm loads, both channels driven, from 120 – 10,000 Hz; rated 50 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milli watts to rated output.

Total harmonic distortion: less than 0.1% (6 ohms at 1 kHz, 25 W)
AEP models
HCD-CL3:
DIN power output (Rated): 80 + 80 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference): 100 + 100 watts (6 ohms at 1 kHz, 10% THD)
Music power output (Reference): 180 + 180 watts (6 ohms at 1 kHz, 10% THD)
HCD-CL1:
DIN power output (Rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)
Music power output (Reference): 95 + 95 watts (6 ohms at 1 kHz, 10% THD)

Other models
The following measured at AC 120/220/240 V, 50/60 Hz
HCD-CL3:
DIN power output (Rated): 80 + 80 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference): 100 + 100 watts (6 ohms at 1 kHz, 10% THD)
HCD-CL1:
DIN power output (Rated): 40 + 40 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (Reference): 50 + 50 watts (6 ohms at 1 kHz, 10% THD)

Inputs
MD IN (phono jacks): voltage 450 mV, impedance 47 kilohms
Outputs
CD DIGITAL OUT (Supported sampling frequencies: 32 kHz, 44.1 kHz and 48 kHz)
PHONES (stereo minijack): accepts headphones of 8 ohms or more.

— Continued on next page —

COMPACT HiFi COMPONENT SYSTEM

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CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)

Tape deck section

Recording system	4-track 2-channel stereo
Frequency response	40 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section	
Tuning range	87.5 – 108.0 MHz (50 kHz step)
Antenna	FM lead antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	
AEP models:	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	AM loop antenna External antenna terminals
Intermediate frequency	450 kHz

General

Power requirements	
North American model:	120 V AC, 60 Hz
AEP models:	230 V AC, 50/60 Hz
Australian and New Zealand models:	230 – 240 V AC, 50/60 Hz
Mexican model:	120 V AC, 60 Hz
Korean model:	220 V AC, 60 Hz
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Mass	
Amplifier/Tuner/Tape/CD section:	
HCD-CL3:	Approx. 8.0 kg
HCD-CL1:	Approx. 7.7 kg

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

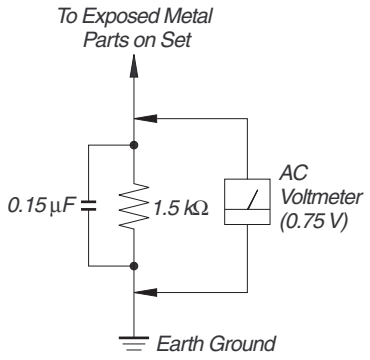

Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

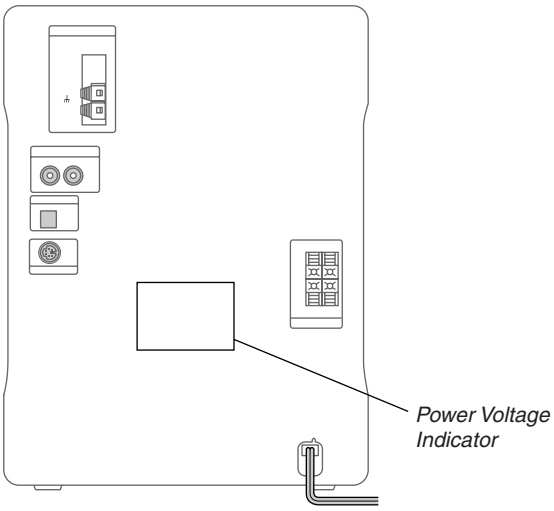
This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION
– Back Panel –



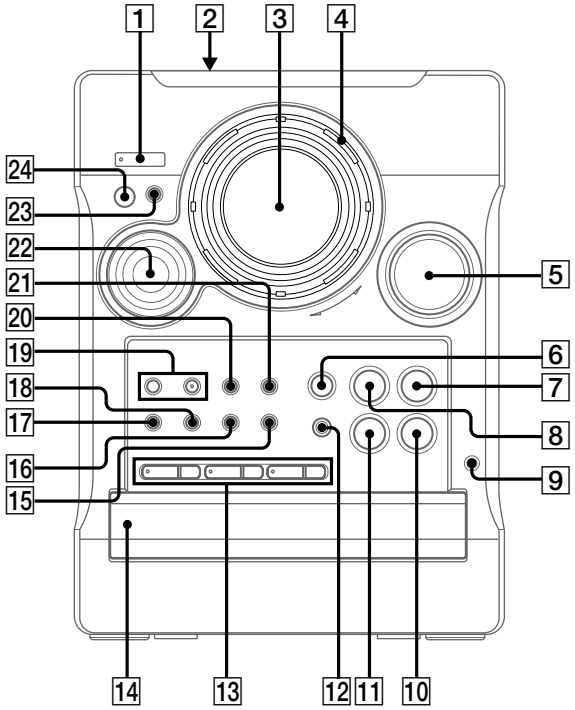
Model	Power Voltage Incdication
US, Mexican models	AC: 120 V 60 Hz
AEP, UK models	AC: 230 V 50/60 Hz
Australian model	AC: 230 – 240V 50/60 Hz
E, Taiwan models	AC: 110, 220/ 230 – 240 V 50/60 Hz
Korea model	AC: 220 V 60 Hz

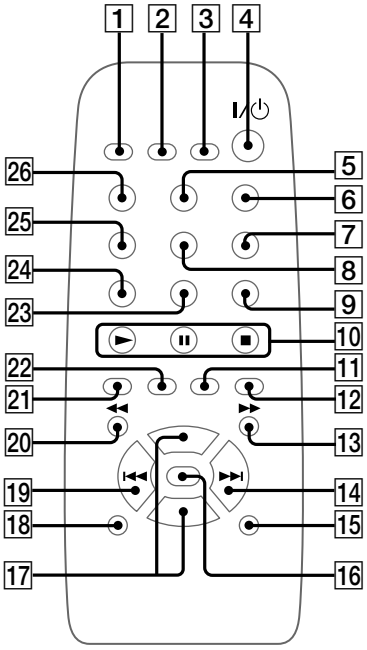
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 2
GENERAL

This section is extracted from instruction manual.





BASS/TREBLE 22 (21)
CD 1 – 3 13 (11)
CD 1 – 3 ⏏ 13 (9)
CD disc tray 14 (9)
CD SYNC 19 (18)
CD ►II 8 (9)
DBFB 21 (20)
DIMMER 15 (7)
DISPLAY 23 (8, 12)
Display window 3
EDIT 20 (18)
FUNCTION 12 (9, 17, 18)
GROOVE 17 (20)
MD 10 (24)
MUSIC MENU 22 (21)
PHONES jack 9
PLAY MODE/DIRECTION 18 (9, 17, 18)
REC PAUSE/START 19 (18, 19)
Remote sensor 24
REPEAT 16 (10)
STEREO/MONO 16 (15)
Tape deck lid 2 (17)
TAPE ◄► 11 (17, 18)
TUNER/BAND 7 (14, 15)
VOLUME 5

BUTTON DESCRIPTIONS

I/⏻ 1
I◄◄ /►►I 4
■ 6
◄◄/►► 22
+/– 22

CHECK 8 (11)
CLEAR 12 (11)
CLOCK/TIMER SELECT 2 (20, 23)
CLOCK/TIMER SET 3 (8, 19, 22)
DBFB 26 (20)
DIMMER 23 (7)
DISC SKIP 9 (10, 12)
DISPLAY 18 (8, 12)
ENTER/YES 11 (8, 13, 14, 19, 22)
FUNCTION 15 (9, 17, 18)
GROOVE 16 (20)
MENU/NO 21 (14)
MUSIC MENU 6 (21)
NAME EDIT/CHARACTER 22 (12, 16)
REPEAT 7 (10)
SCROLL 25 (13)
SLEEP 1 (22)
SURROUND 5 (20)
TUNER/BAND 24 (14, 15)
VOL +/– 17

BUTTON DESCRIPTIONS

I/⏻ 4
► 10
■ 10
II 10
►► 13
►►I 14
I◄◄ 19
◄◄ 20

Setting the time

1 Turn on the system.

2 Press CLOCK/TIMER SET on the remote.

Proceed to step 5 when you set the clock for the first time.

3 Turn I◀◀ /▶▶I (or press I◀◀ or ▶▶I on the remote) to select "CLOCK SET?".

4 Press ENTER/YES.

5 Turn I◀◀ /▶▶I (or press I◀◀ or ▶▶I on the remote) to set the hour.

6 Press ▶▶ (or ENTER/YES on the remote).

The minute indication flashes.

7 Turn I◀◀ /▶▶I (or press I◀◀ or ▶▶I on the remote) to set the minute.

8 Press ENTER/YES on the remote.

The clock starts working.

If you made a mistake

Press ◀◀ or ▶▶ repeatedly until the incorrect item flashes, then set it again.

To change the preset time

Start over from step 1.

Saving the power in standby mode

Press DISPLAY repeatedly when the system is off. Each time you press the button, the system switches cyclically as follows:

Demonstration → Clock display → Power Saving Mode

To cancel the Power Saving Mode

Press DISPLAY once to show the demonstration, twice to show the clock display.

Tip

I/⏻ indicator lights up even in the Power Saving Mode.

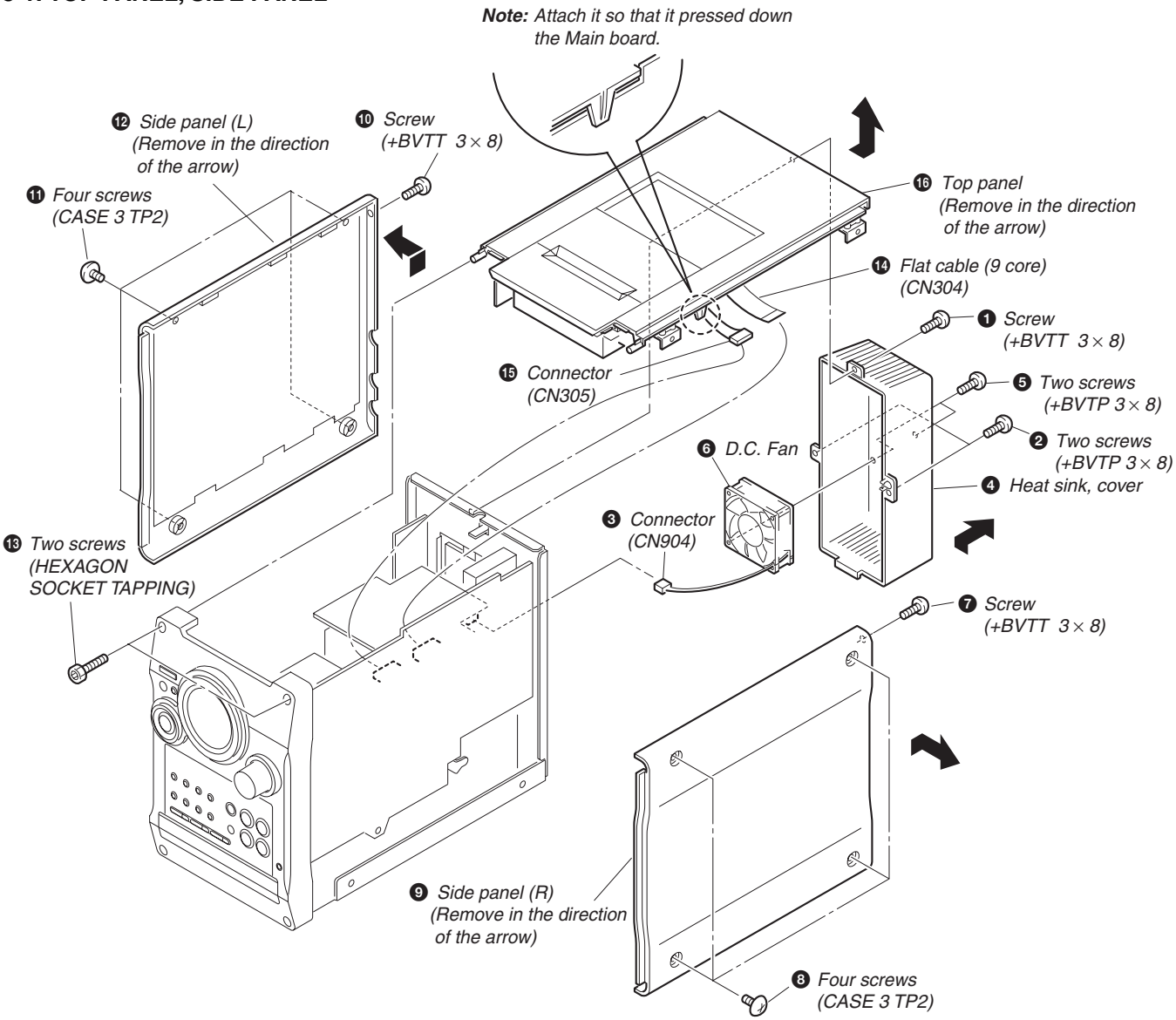
SECTION 3
DISASSEMBLY

• The equipment can be removed using the following procedure.

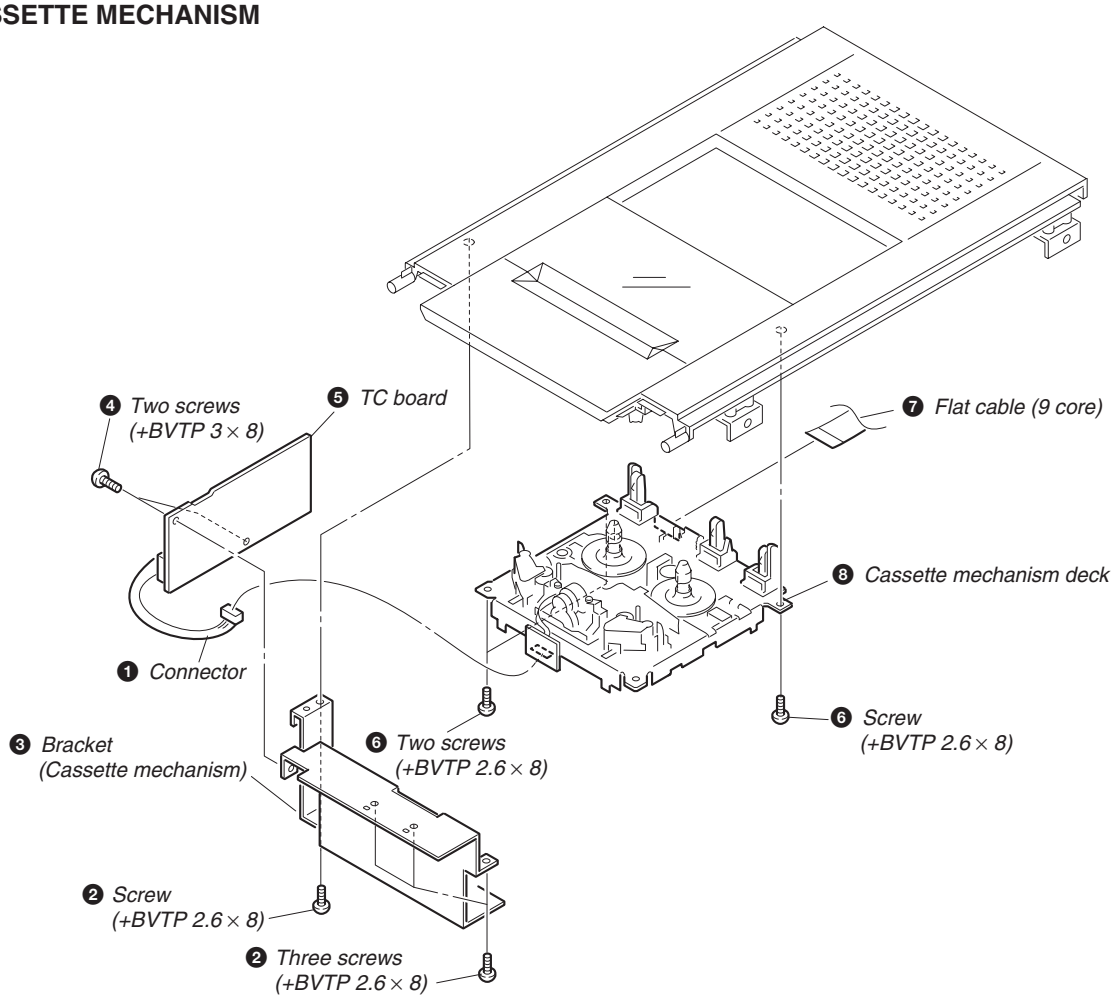
Set
↓
Top panel, Side panel
↓
Cassette mechanism
Front panel → *Panel board*
Back panel, Main board → *Amp board, Power transformer*
CD mechanism → *CD base unit (BU-30BD60)* → *Driver board* → *Fitting base (stabilizer) assy, Tray assy* → *Tray sensor board* → *Slider (loading), Gear (slider)* → *Stocker assy* → *Disc sensor board* → *IN OUT SW board* → *Motor assy (M721), Motor board*

Note : Follow the disassembly procedure in the numerical order given.

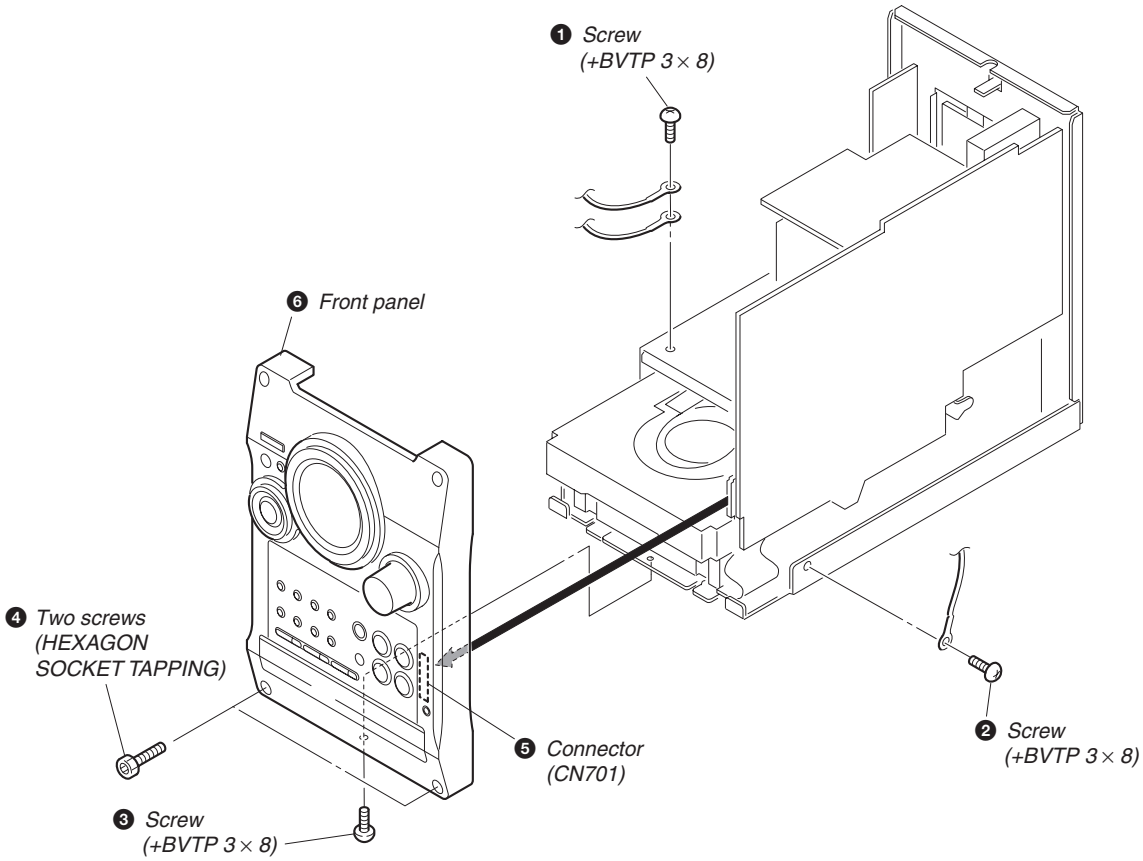
3-1. TOP PANEL, SIDE PANEL


Note: Attach it so that it pressed down the Main board.
⓬ Side panel (L) (Remove in the direction of the arrow)
⓫ Four screws (CASE 3 TP2)
⓭ Two screws (HEXAGON SOCKET TAPPING)
⓾ Screw (+BVTT 3 × 8)
⓰ Top panel (Remove in the direction of the arrow)
⓮ Flat cable (9 core) (CN304)
⓯ Connector (CN305)
❶ Screw (+BVTT 3 × 8)
❺ Two screws (+BVTP 3 × 8)
❷ Two screws (+BVTP 3 × 8)
❻ D.C. Fan
❹ Heat sink, cover
❸ Connector (CN904)
❼ Screw (+BVTT 3 × 8)
❾ Side panel (R) (Remove in the direction of the arrow)
❽ Four screws (CASE 3 TP2)

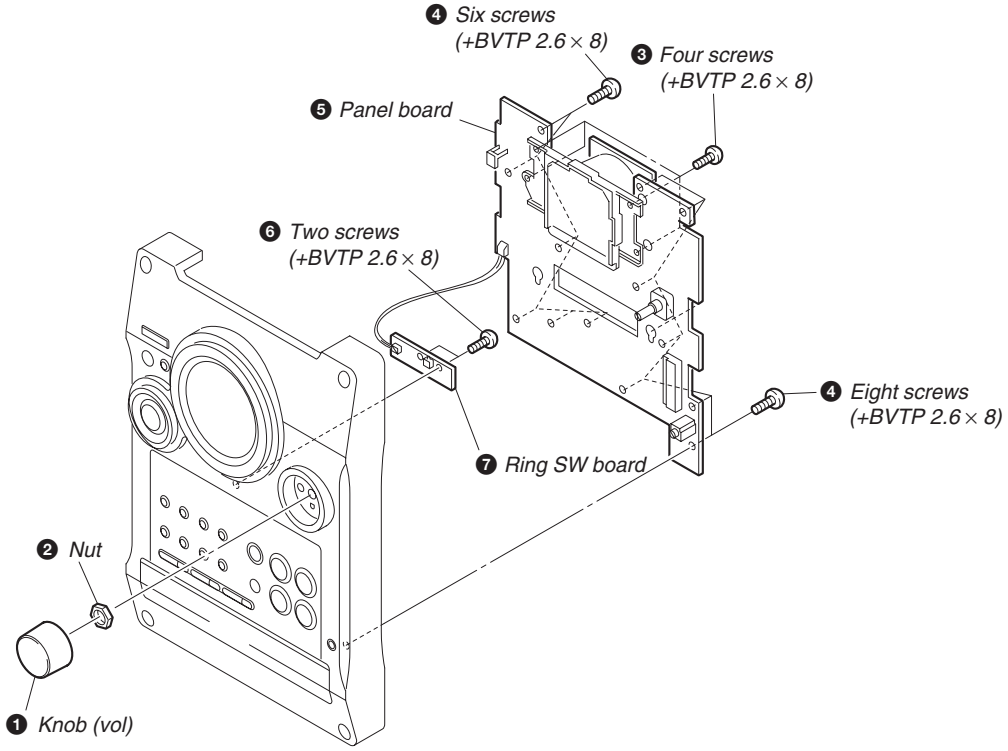
3-2. CASSETTE MECHANISM


❹ Two screws (+BVTP 3 × 8)
❺ TC board
❼ Flat cable (9 core)
❽ Cassette mechanism deck
❶ Connector
❻ Screw (+BVTP 2.6 × 8)
❸ Bracket (Cassette mechanism)
❻ Two screws (+BVTP 2.6 × 8)
❷ Screw (+BVTP 2.6 × 8)
❷ Three screws (+BVTP 2.6 × 8)

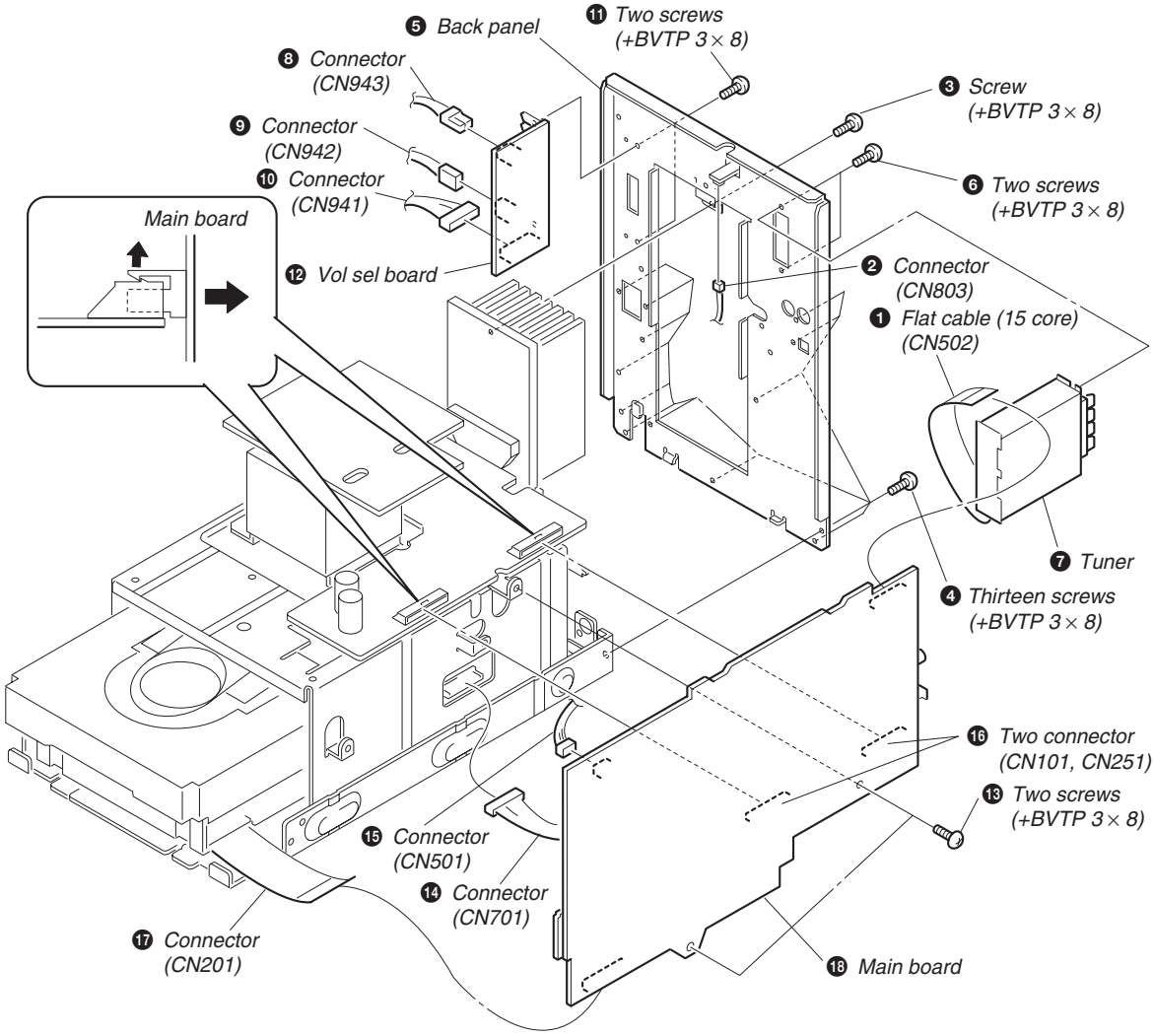
3-3. FRONT PANEL



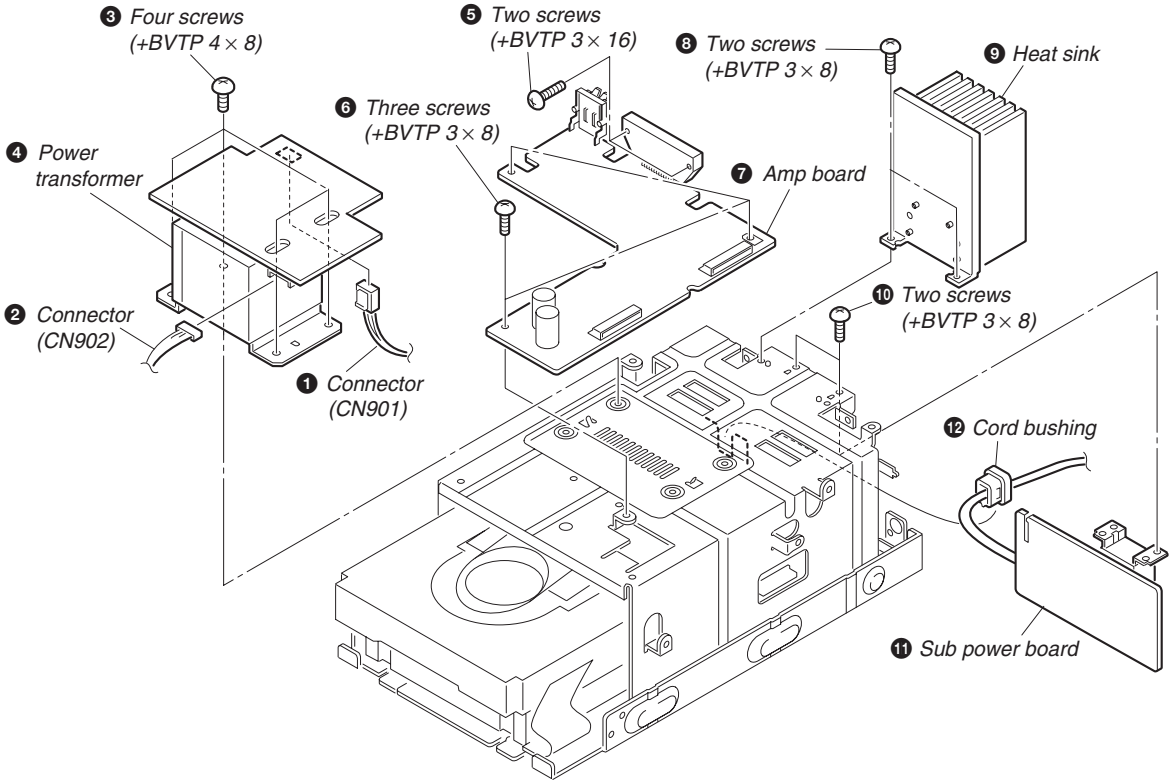
3-4. PANEL BOARD


❹ Six screws (+BVTP 2.6 × 8)
❸ Four screws (+BVTP 2.6 × 8)
❺ Panel board
❻ Two screws (+BVTP 2.6 × 8)
❹ Eight screws (+BVTP 2.6 × 8)
❼ Ring SW board
❷ Nut
❶ Knob (vol)

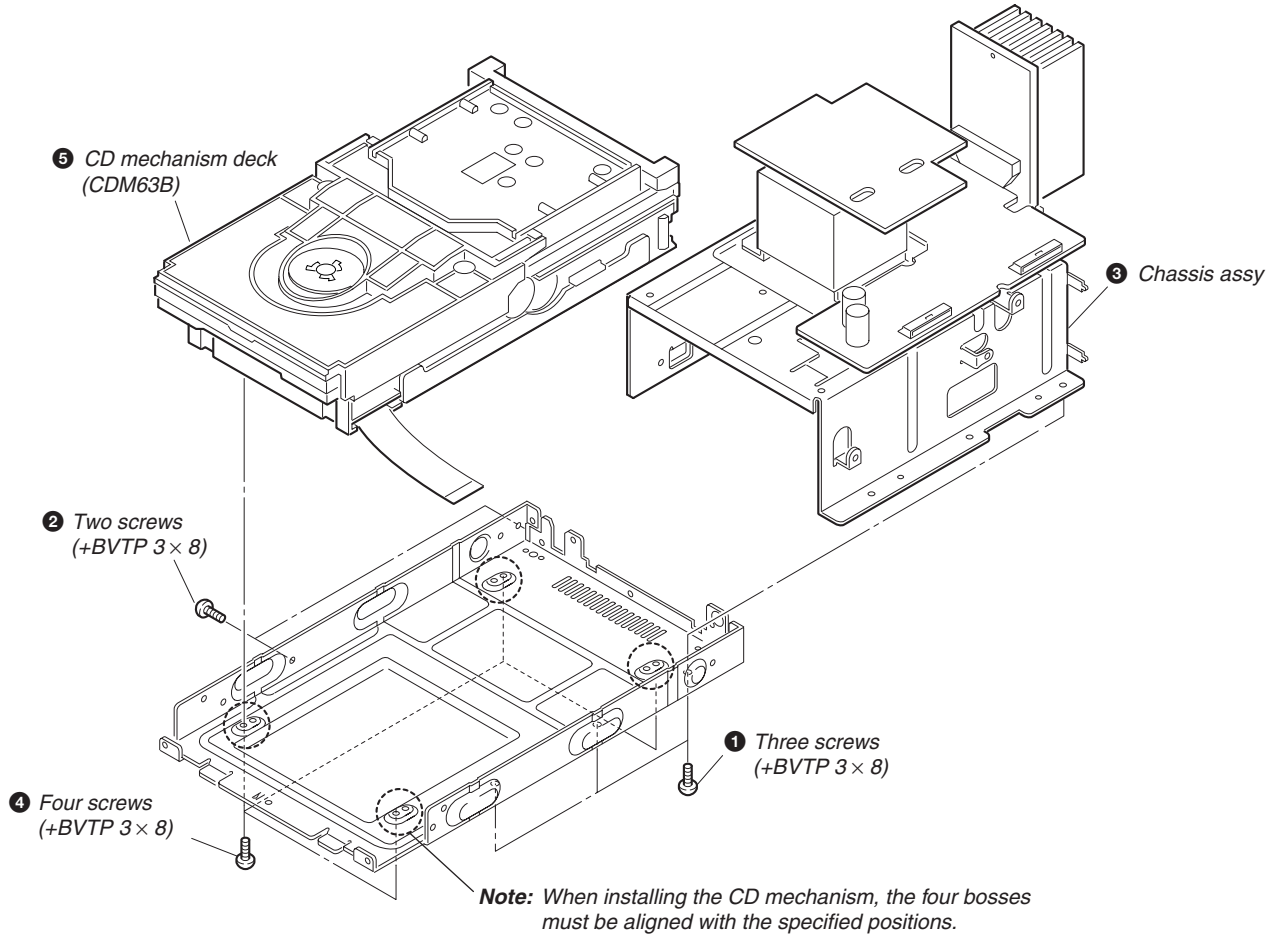
3-5. BACK PANEL, MAIN BOARD


❺ Back panel
⓫ Two screws (+BVTP 3 × 8)
❽ Connector (CN943)
❸ Screw (+BVTP 3 × 8)
❾ Connector (CN942)
❻ Two screws (+BVTP 3 × 8)
❿ Connector (CN941)
Main board
⓬ Vol sel board
❷ Connector (CN803)
❶ Flat cable (15 core) (CN502)
❼ Tuner
❹ Thirteen screws (+BVTP 3 × 8)
⓰ Two connector (CN101, CN251)
⓭ Two screws (+BVTP 3 × 8)
⓯ Connector (CN501)
⓮ Connector (CN701)
⓱ Connector (CN201)
⓲ Main board

3-6. AMP BOARD, POWER TRANSFORMER

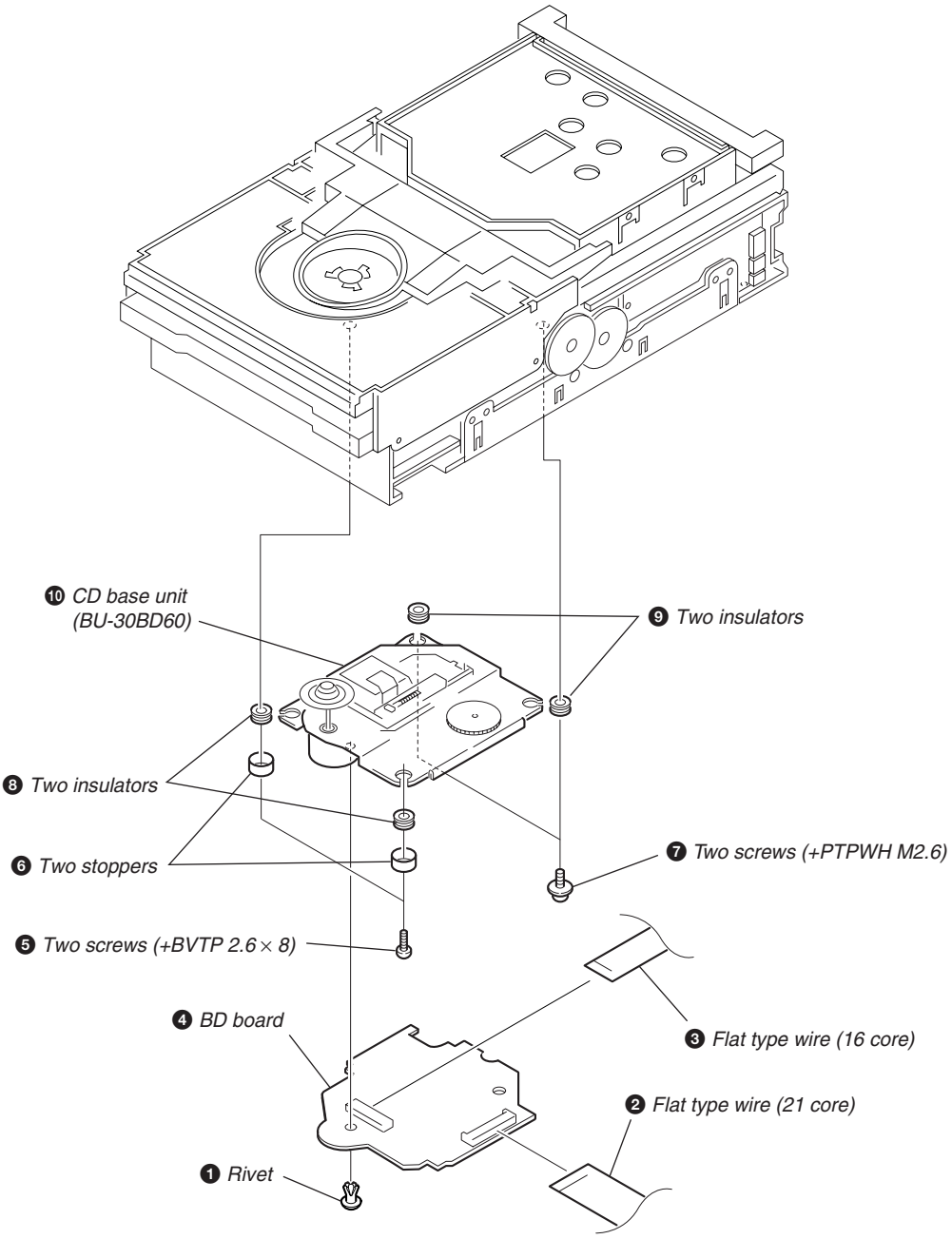

❸ Four screws (+BVTP 4 × 8)
❺ Two screws (+BVTP 3 × 16)
❽ Two screws (+BVTP 3 × 8)
❾ Heat sink
❻ Three screws (+BVTP 3 × 8)
❹ Power transformer
❼ Amp board
❷ Connector (CN902)
❶ Connector (CN901)
❿ Two screws (+BVTP 3 × 8)
⓬ Cord bushing
⓫ Sub power board

3-7. CD MECHANISM

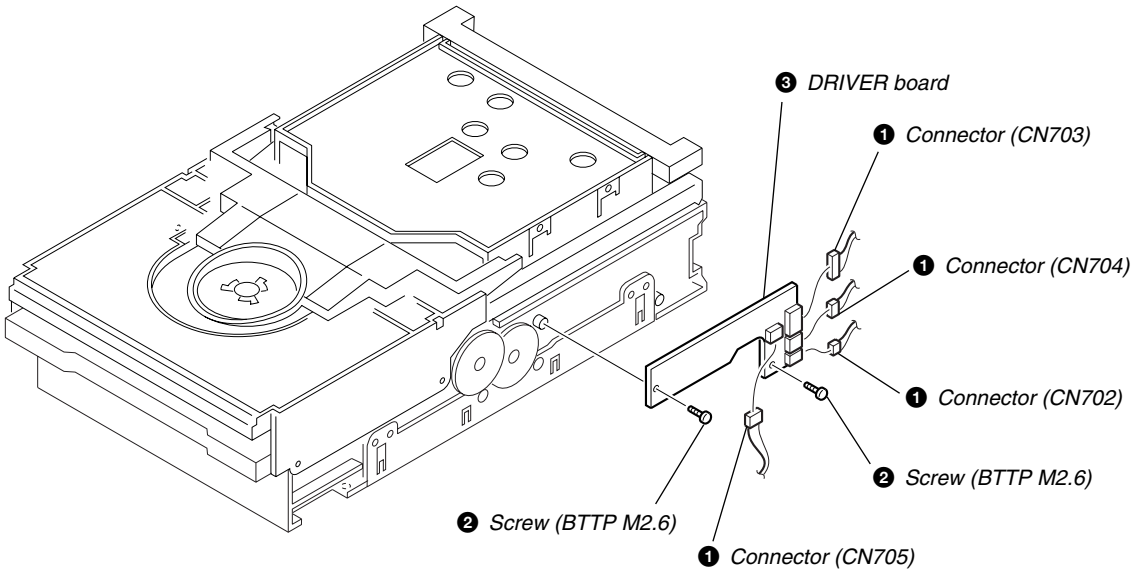


Note: *When installing the CD mechanism, the four bosses must be aligned with the specified positions.*

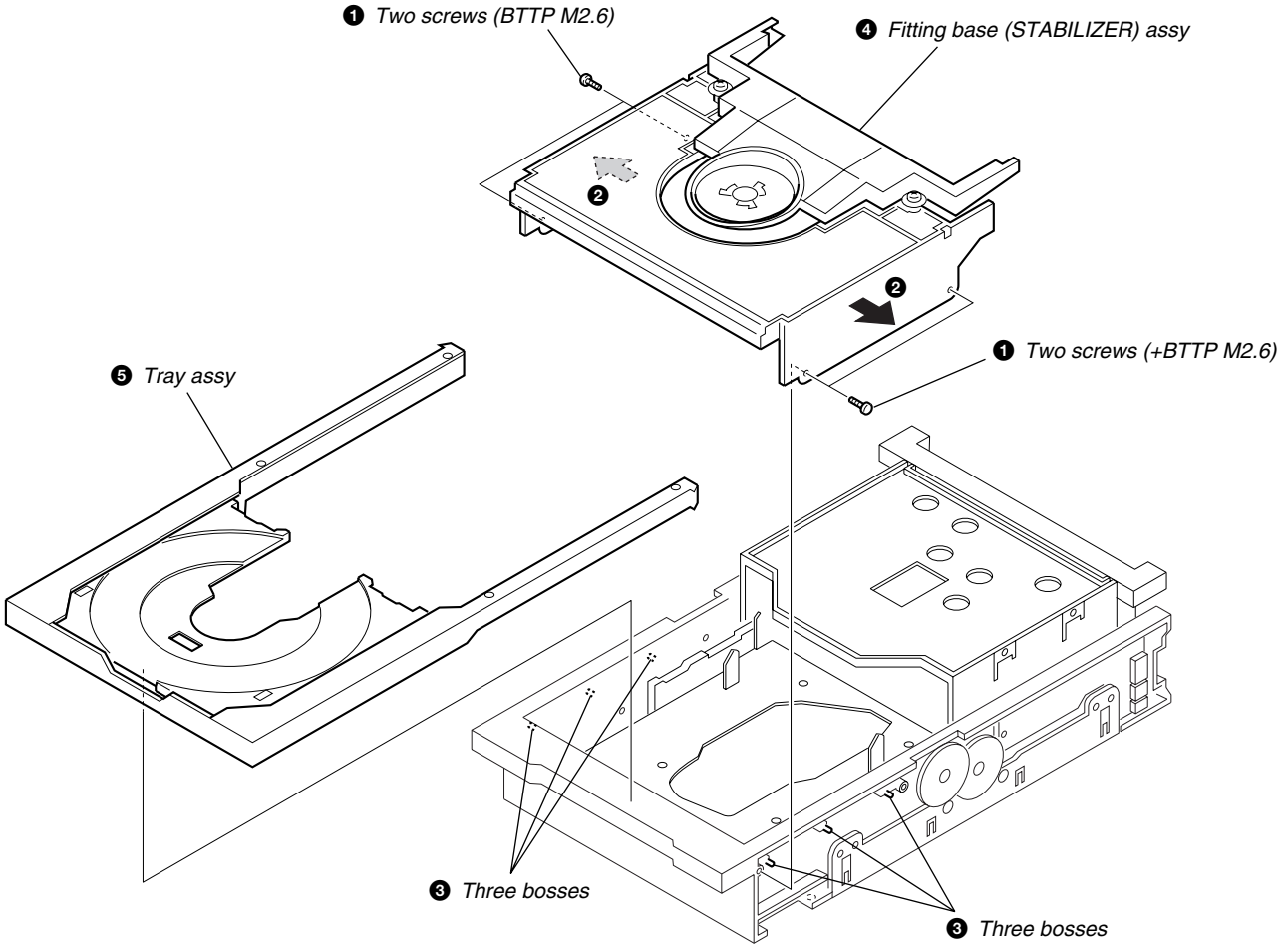
3-8. CD BASE UNIT (BU-30BD60)


❿ CD base unit (BU-30BD60)
❾ Two insulators
❽ Two insulators
❼ Two screws (+PTPWH M2.6)
❻ Two stoppers
❺ Two screws (+BVTP 2.6 × 8)
❹ BD board
❸ Flat type wire (16 core)
❷ Flat type wire (21 core)
❶ Rivet

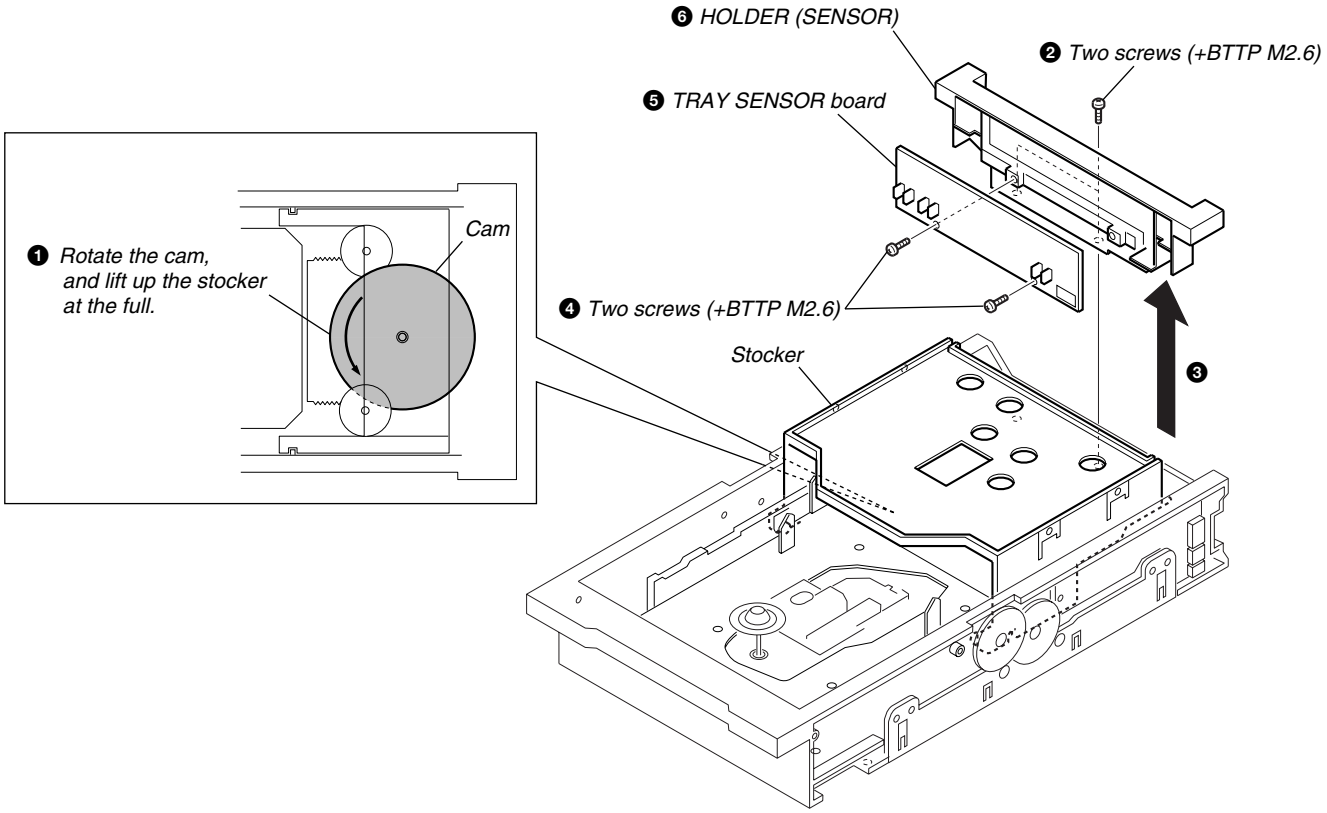
3-9. DRIVER BOARD



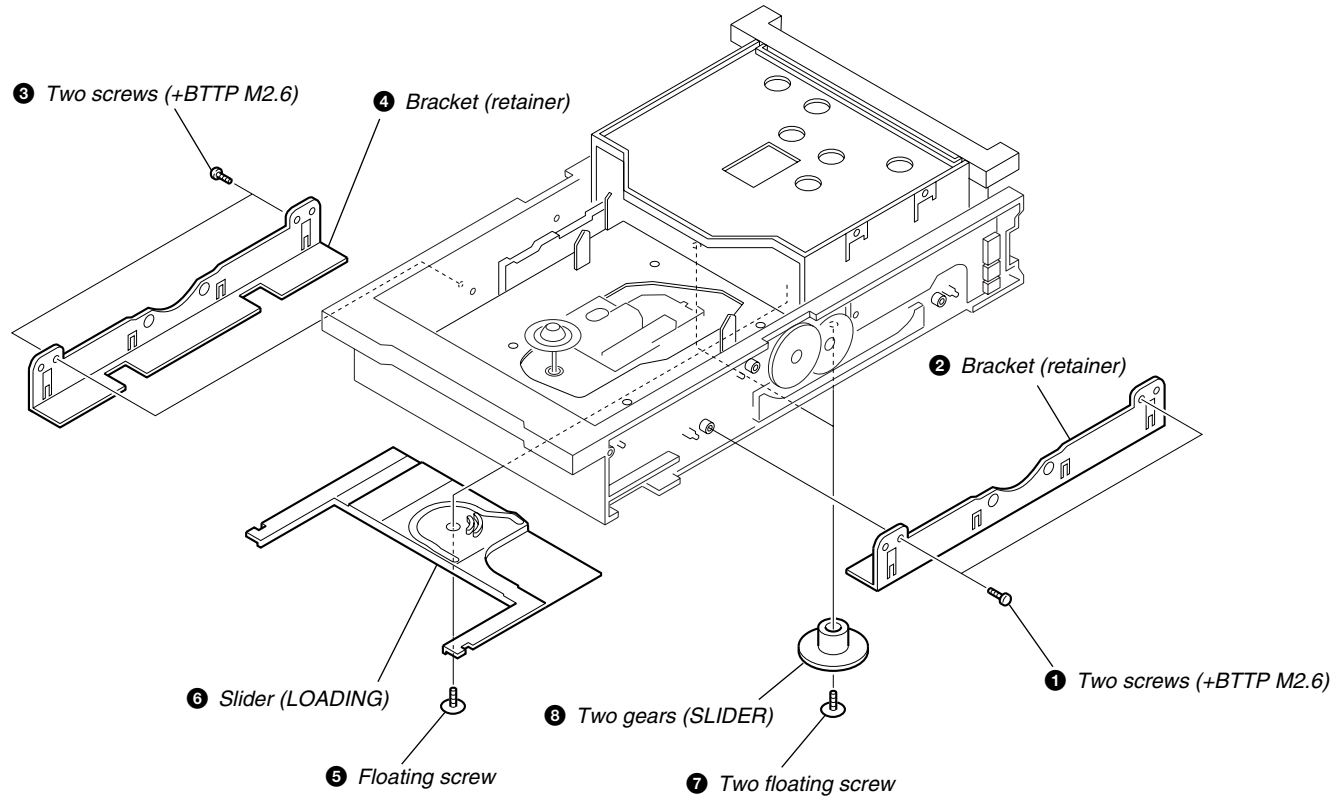
3-10. FITTING BASE (STABILIZER) ASSY, TRAY ASSY



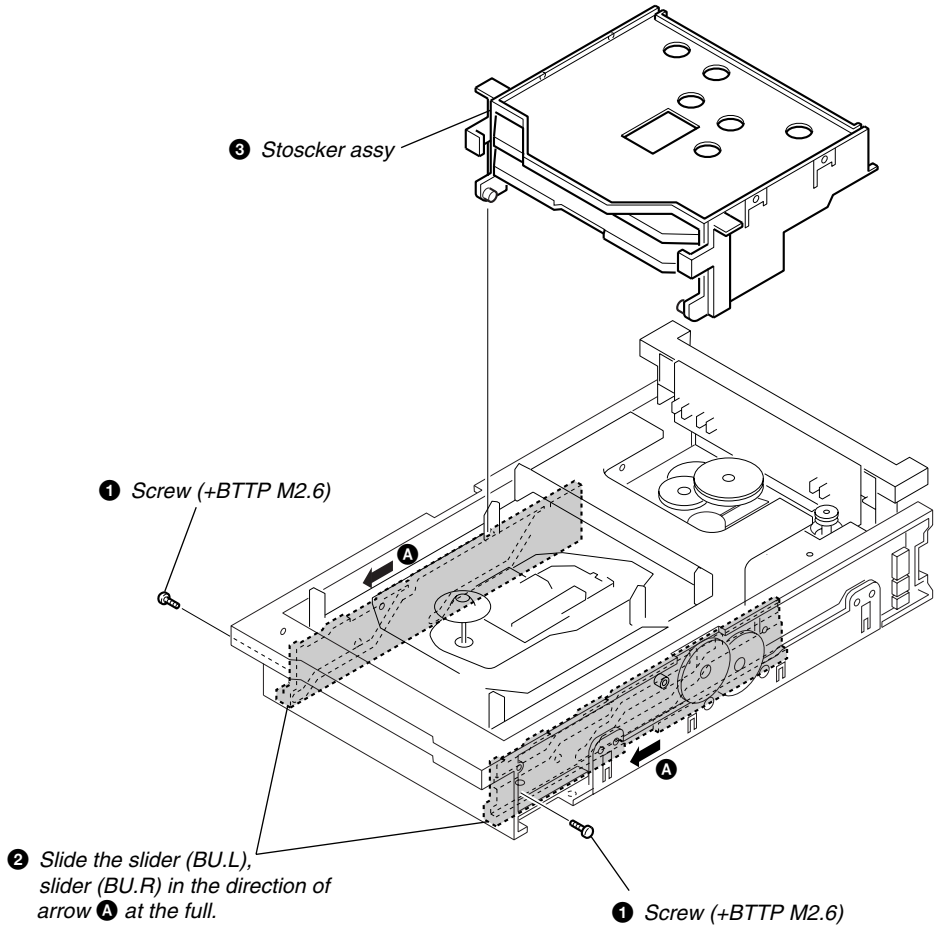
3-11. TRAY SENSOR BOARD


❻ HOLDER (SENSOR)
❷ Two screws (+BTTP M2.6)
❺ TRAY SENSOR board
Cam
❶ Rotate the cam, and lift up the stocker at the full.
❹ Two screws (+BTTP M2.6)
Stocker
❸

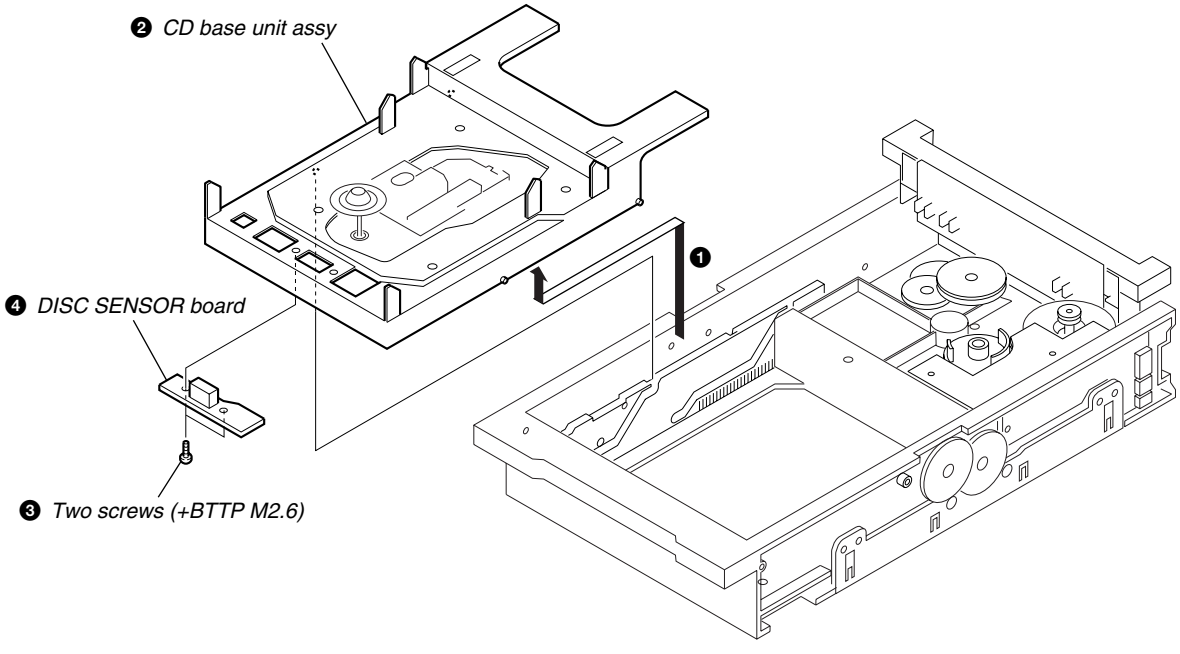
3-12. SLIDER (LOADING), GEAR (SLIDER)



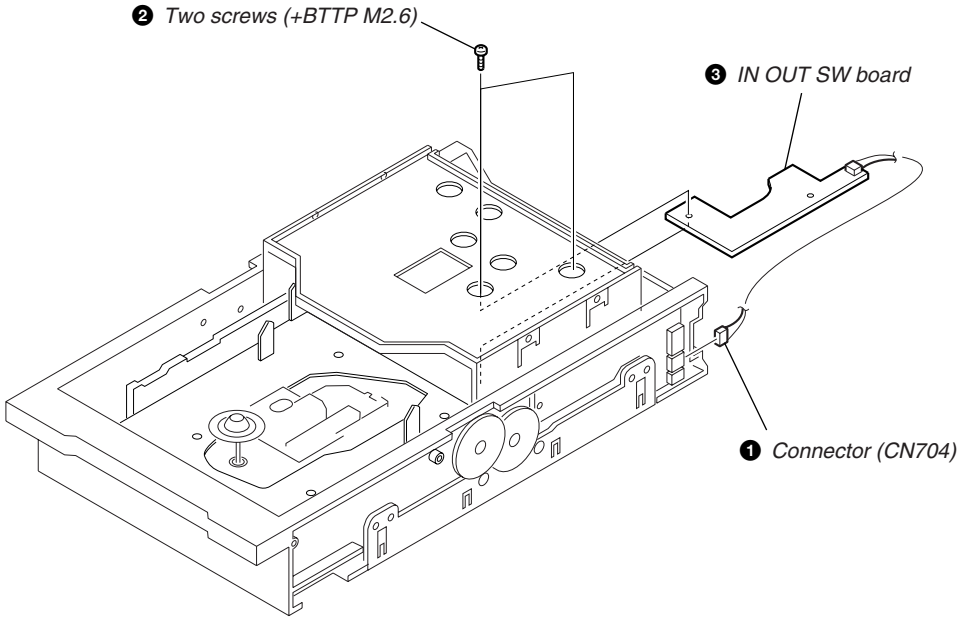
3-13. STOCKER ASSY, TRAY (SUB)



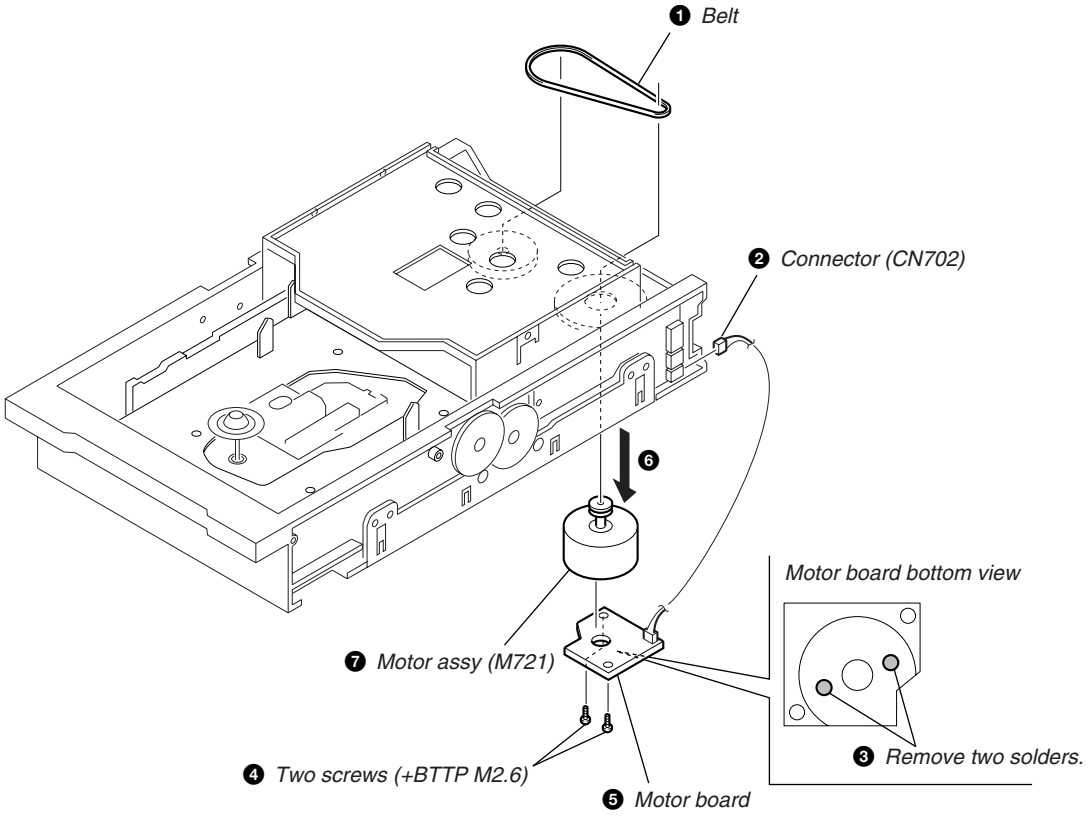
3-14. DISC SENSOR BOARD



3-15. IN OUT SW BOARD



3-16. MOTOR ASSY (M721), MOTOR BOARD



SECTION 4
TEST MODE

[CD Ship Mode]

• This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [CD 1] button and [FUNCTION] button simultaneously.
3. After the "STANDBY" display blinks six times, a message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

[GC Test Mode]

• This mode is used to check the software version, FL tube, LED, keyboard and VACS.

Procedure:

1. Press three buttons [■], [DISPLAY], and [CD 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
3. When you want to enter the software version display mode, press [CD 1]. The model number and destination are displayed.
4. Each time [CD 1] is pressed, the display changes starting from MC version, GC version, CD version, CDD version, CDM version, BD version, ST version, TA version, TM version, TC version and MD version in this order.
5. Press [CD 2] button, and the key check mode is activated.
6. In the key check mode, the fluorescent indicator tube displays "K 0 J 0 V 0". Each time a button is pressed, "K 0" value increases. However, once a button is pressed, it is no longer taken into account.
   "V 0" value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
7. Also when [CD 3] is pressed after lighting of all LEDs and FL tubes, value of VACS appears.
8. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[MC Test Mode]

• This mode is used to check operations of the respective sections of Amplifier, Tuner, CD and Tape.

Procedure:

1. Press the [I/⏻] button to turn on the set.
2. Press the three buttons of [■], [DISPLAY] and [CD 3] simultaneously.
3. The "VOLUME" segment flashes.
4. Every pressing of [BASS/TREBLE △] changes the displays in the order of
   "GEQ MIN"→"GEQ FLAT"→"GEQ MAX"
5. When the VOLUME control knob is turned clockwise even slightly, the sound volume increases to its maximum and a message "VOLUME MAX" appears for two seconds, then the display returns to the original display.
6. When the VOLUME control knob is turned counter-clockwise even slightly, the sound volume decreases to its minimum and a message "VOLUME MIN" appears for two seconds, then the display returns to the original display.
7. In the test mode, the default-preset channel is called even when the TUNER is selected and an attempt is made to call the preset channel that has been stored in memory, by operating the Shuttle knob. (It means that the memory is cleared.)
8. When a tape is inserted in Deck and recording is started, the input source function selects MD automatically.
9. When [■] button is pressed to stop recording, the Tape (Deck) is selected and tape is rewound using the [◀◀] button, tape is rewound, tape is stops at around the record-starting position and playback of the recorded portion of the tape is started. If PAUSE is inserted even once during recording, tape is rewound to the position around the PAUSE position and is played back.
10. The cold reset is enforced at the same time.

[CD Service Mode]

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "CD".
3. Press three buttons [■], [FUNCTION], and [CD 2] simultaneously.
4. The CD service mode is selected.
5. With the CD in stop status, turn the shuttle knob clockwise to move the optical pick-up to outside track, or turn the shuttle knob counter-clockwise to inside track.
6. To exit from this mode, perform as follows:
   1) Move the optical pick-up to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note: • Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
• Do not run the sled motor excessively, otherwise the gear can be chipped.

[CD Ship (Memory Clear) Mode]

• Set the CD ship mode and set the default setup when shipped from the factory at the next AC power on.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "CD ".
3. Press three buttons [■] , [FUNCTION] and [CD 1] simultaneously.
4. After the "STANDBY" display blinks six times, a message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

[CD/TAPE Repeat 5 Times Limit Release Mode]

• 5 times limit of repeating CD/TAPE is released.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press three buttons [■], [FUNCTION] and [CD 1⏏].
3. 5 times limit of repeating CD/TAPE is released.
4. Cold reset is performed at power off.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads, erase head, capstan, pinch rollers, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.04 – 6.96 N • m (31 to 71 g • cm) (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.20 – 0.58 N • m (2 to 6 g • cm) (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.97 – 14.02 N • m (71 to 143 g • cm) (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	0.98 N • m or more (100 g or more) (3.53 oz or more)
REV tension	CQ-403R	0.98 N • m or more (100 g or more) (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

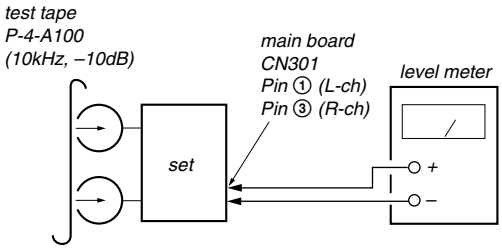
1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

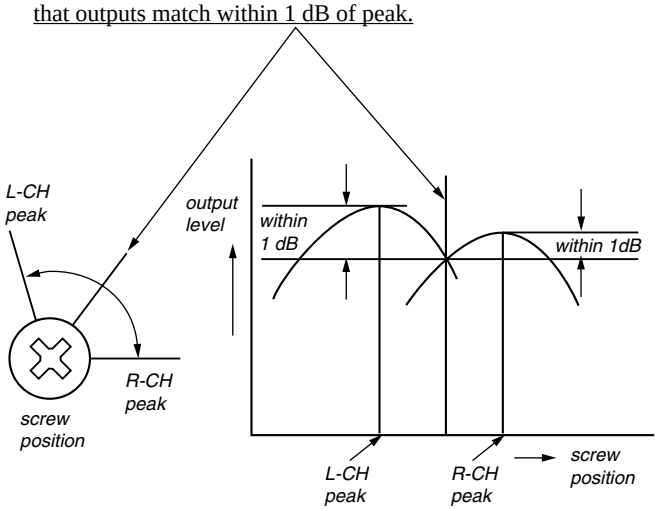
Record/Playback Head Azimuth Adjustment

Procedure:

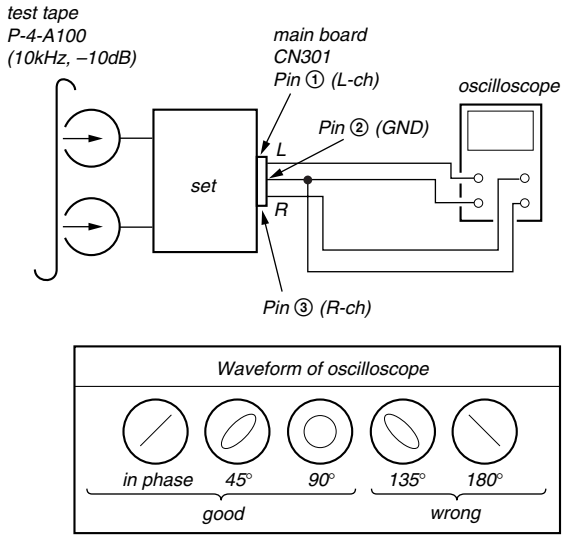
1. Mode : Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Record/Playback/Erase Head

Tape Speed Check

Note: Set the test mode using the following method and begin tape speed adjustment.

Procedure:
With the power turned ON, press the ■ button, ENTER/YES button, and DISC 3 button simultaneously.
(The "VOLUME" on the fluorescent display tube will blink while in the test mode.)
To exit the test mode, press the I/⏻ button.

1. Insert the WS-48B into deck.
2. Press the ◀▶ button of deck.
3. Check the reading of frequency counter becomes 3000 ± 15 Hz.

Sample Value of Wow and flutter

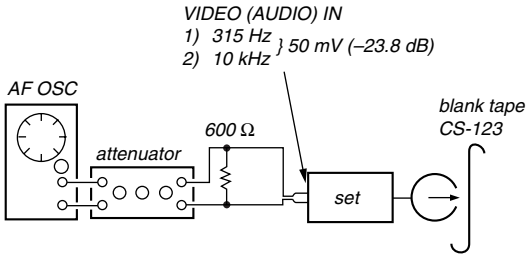
W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

Record Bias Adjustment

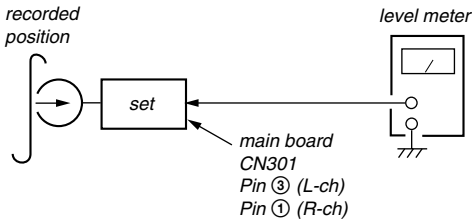
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the ◀◀ button without stopping will return to the position where recording was started.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck, press the TAPE REC PAUSE/START button, and then press the ◀▶ button to start recording.
3. Mode: Record



4. Mode: Playback

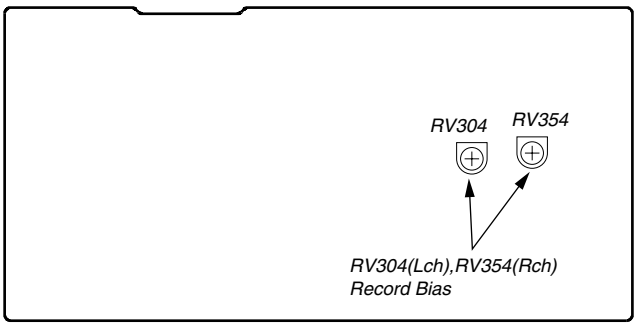


5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV304 (L-CH) and RV354 (R-CH) on the TC board to repeat steps 3 and 4.

Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be 0 ± 0.5 dB.

Adjustment Location:

[TC BOARD]

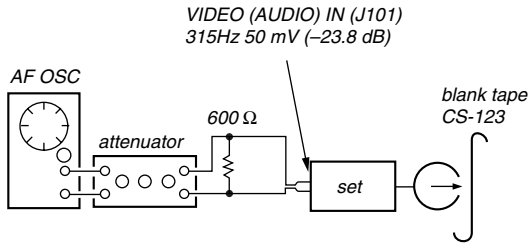


Record Level Adjustment

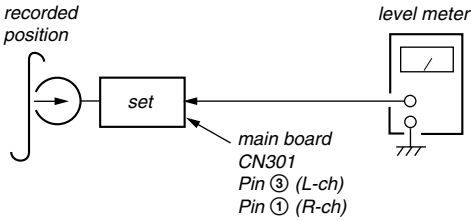
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the ◀◀ button without stopping will return to the position where recording was started.)

1. Press FUNCTION button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck, press the TAPE REC PAUSE/START button, and then press the ◀▶ button to start recording.
3. Mode: Record



4. Mode: Playback

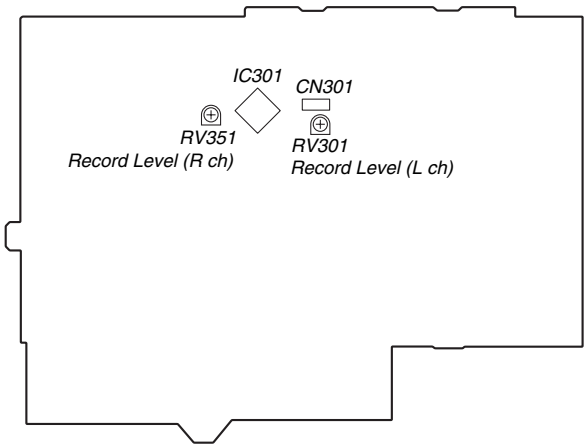


5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 3 and 4.

Adjustment level:
CN301 playback level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location:

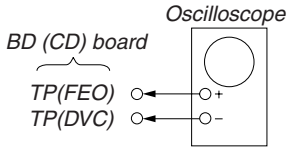
[MAIN BOARD]



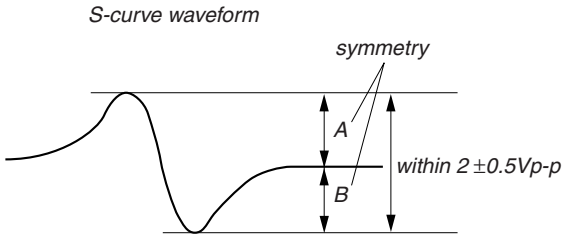
CD SECTION

Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use LUV-P01 (4-999-032-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



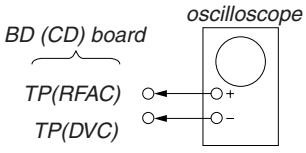
Procedure :
1. Connect an oscilloscope to TP (FEO).
2. Connect between TP (FEI) and TP (DVC) (1.65 V) by lead wire.
3. Turn Power switch on.
4. Load a disc (LUV-P01) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
5. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2 ± 0.5 Vp-p.



6. After check, remove the lead wire connected in step 2.

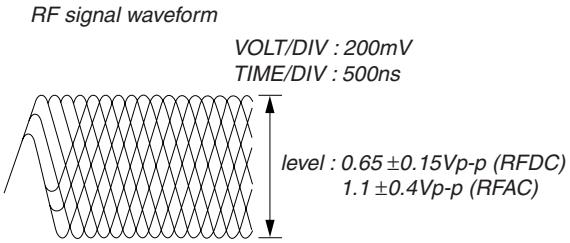
Note :
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

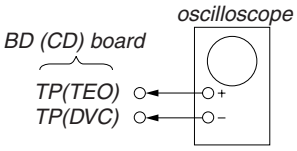


Procedure :
1. Connect an oscilloscope CH1 to TP (RFDC) and CH2 to TP (RFAC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

Note : Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

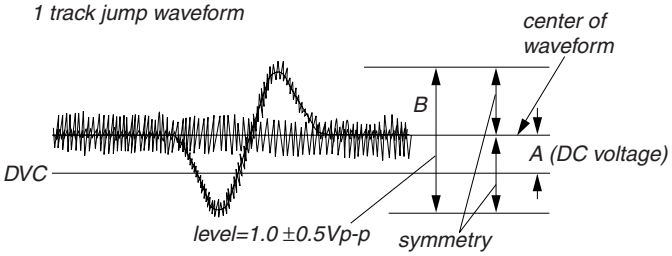


E-F Balance (1 Track jump) Check



Procedure :

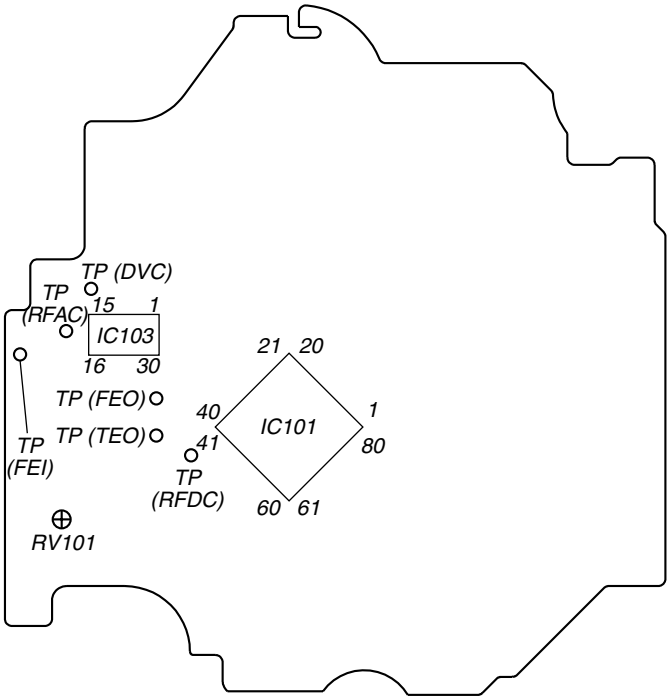
1. Connect an oscilloscope to TP (TEO) and TP (DVC).
2. Turn Power switch on.
3. Load a disc (LUV-P01) and playback the number nine track.
4. Press the ◁I▷ button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.



6. Adjust RV101 on the BD board so that the center of waveform becomes the same voltage of DVC. (i.e. A=0V)

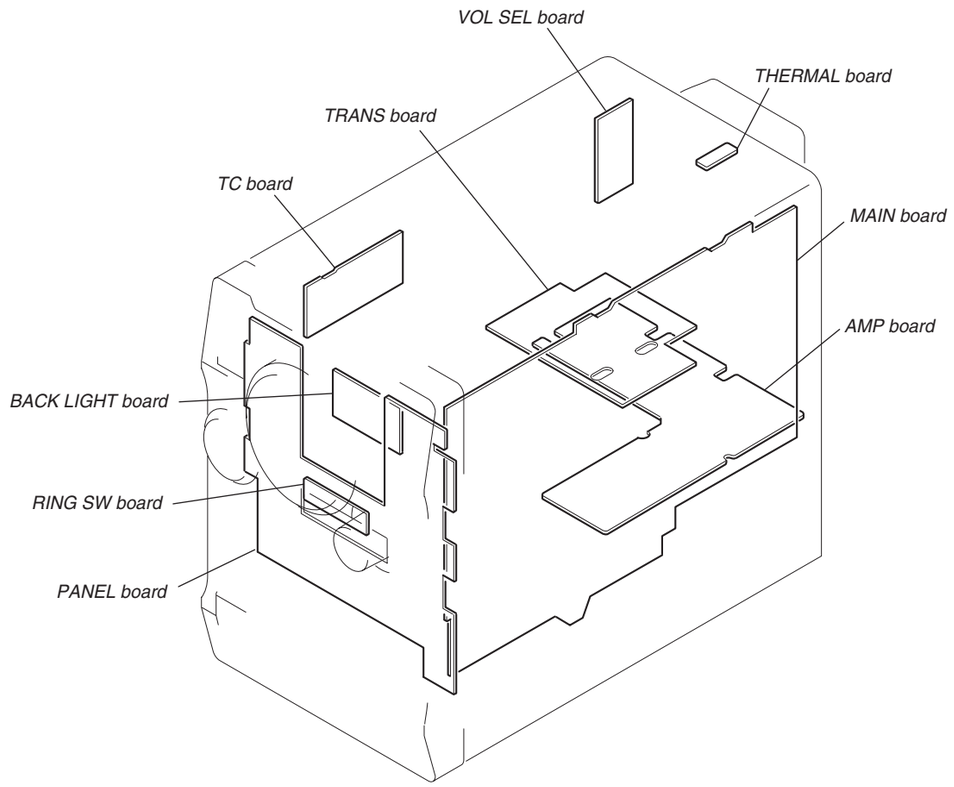
Adjustment Location:

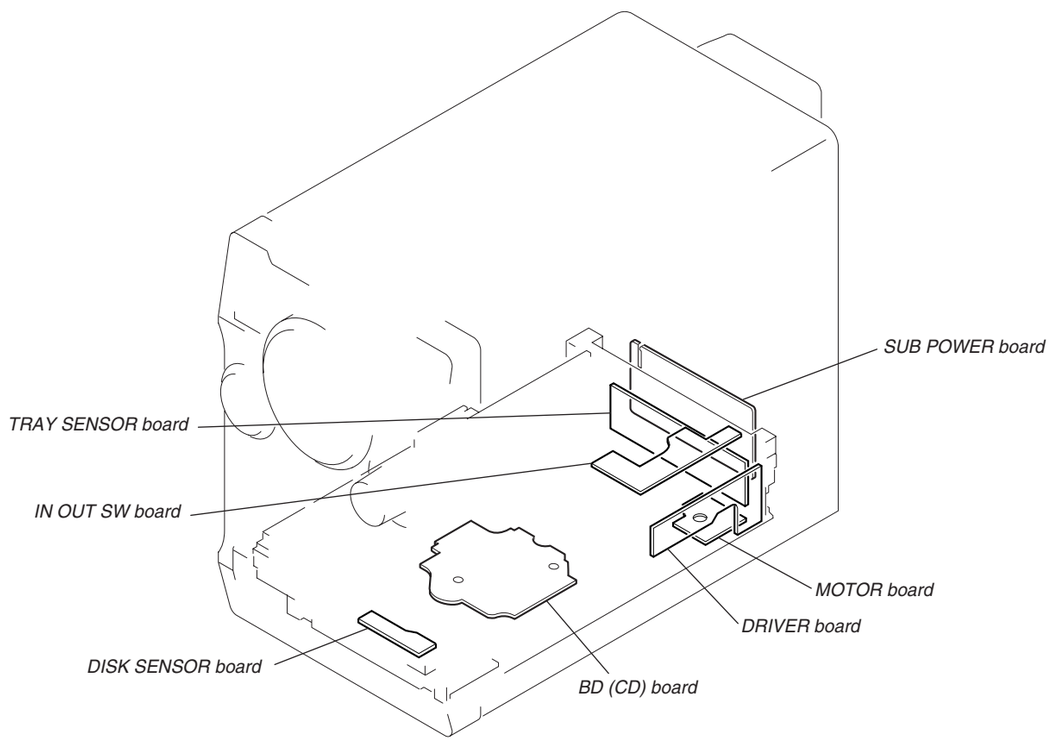
[BD (CD) BOARD] (Conductor Side)



SECTION 7
DIAGRAMS

7-1. CIRCUIT BOARDS LOCATION





THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : B+ Line.
- : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : PB
  - : REC
  - : CD (Analog)
  - : CD (Digital)
- Abbreviation
  - AUS : Australian model
  - MX : Mexican model
  - TW : Taiwan model
  - KR : Korea model

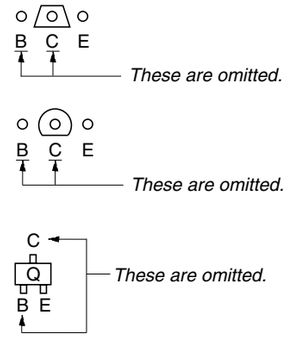
For printed wiring boards.

Note:

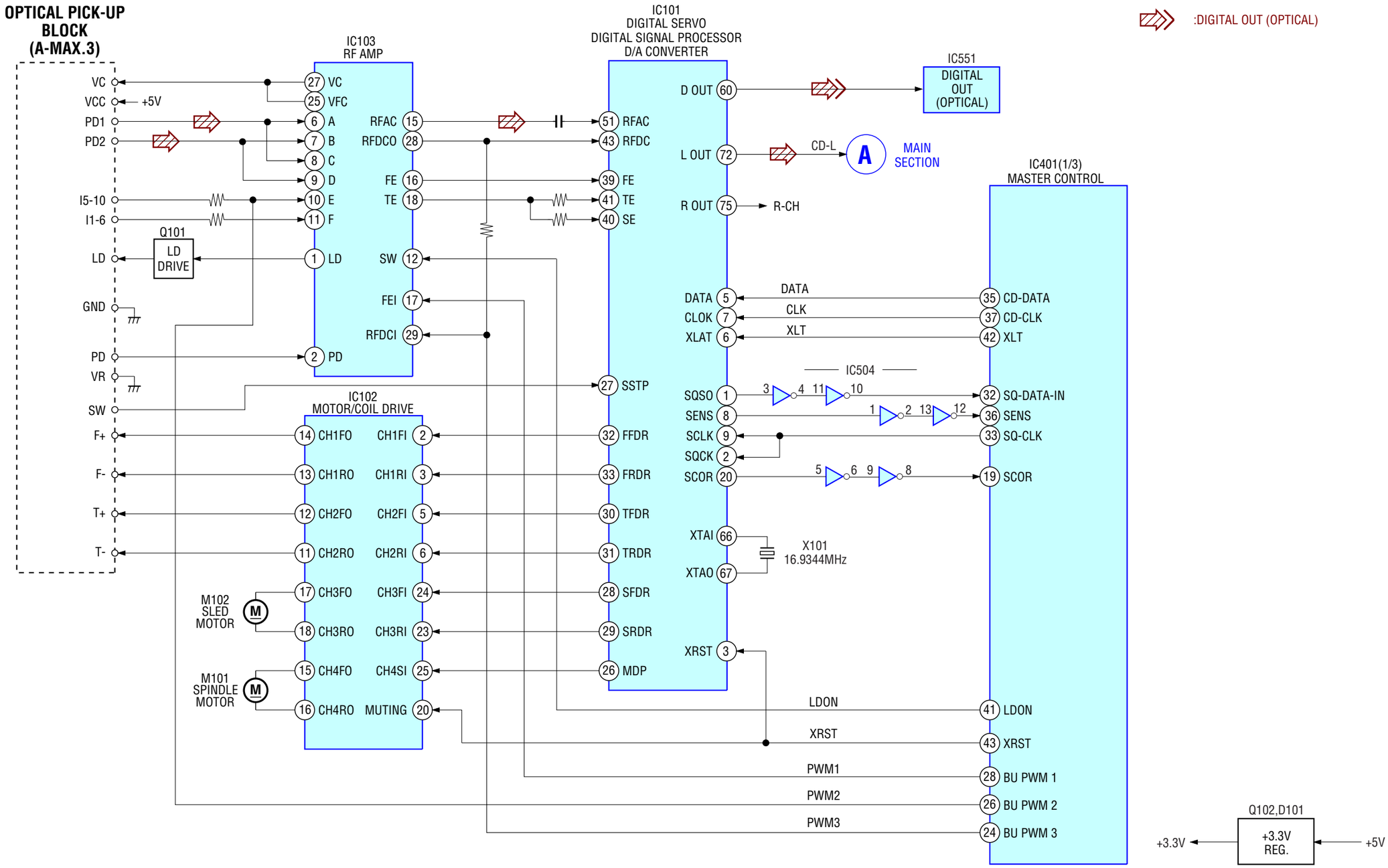
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.

Caution:
Pattern face side: (Side B) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A) Parts on the parts face side seen from the parts face are indicated.

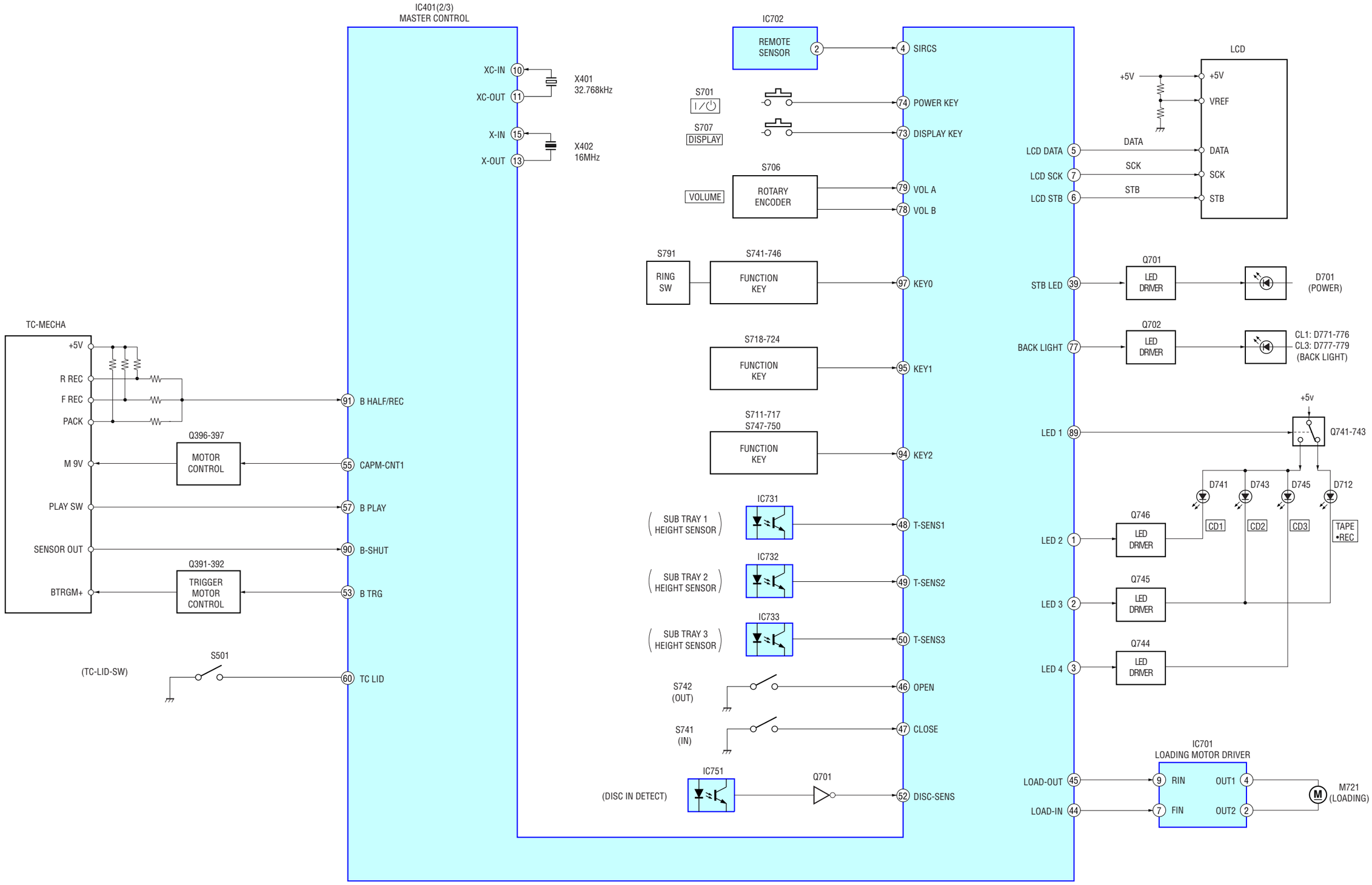
- **Indication of transistor**



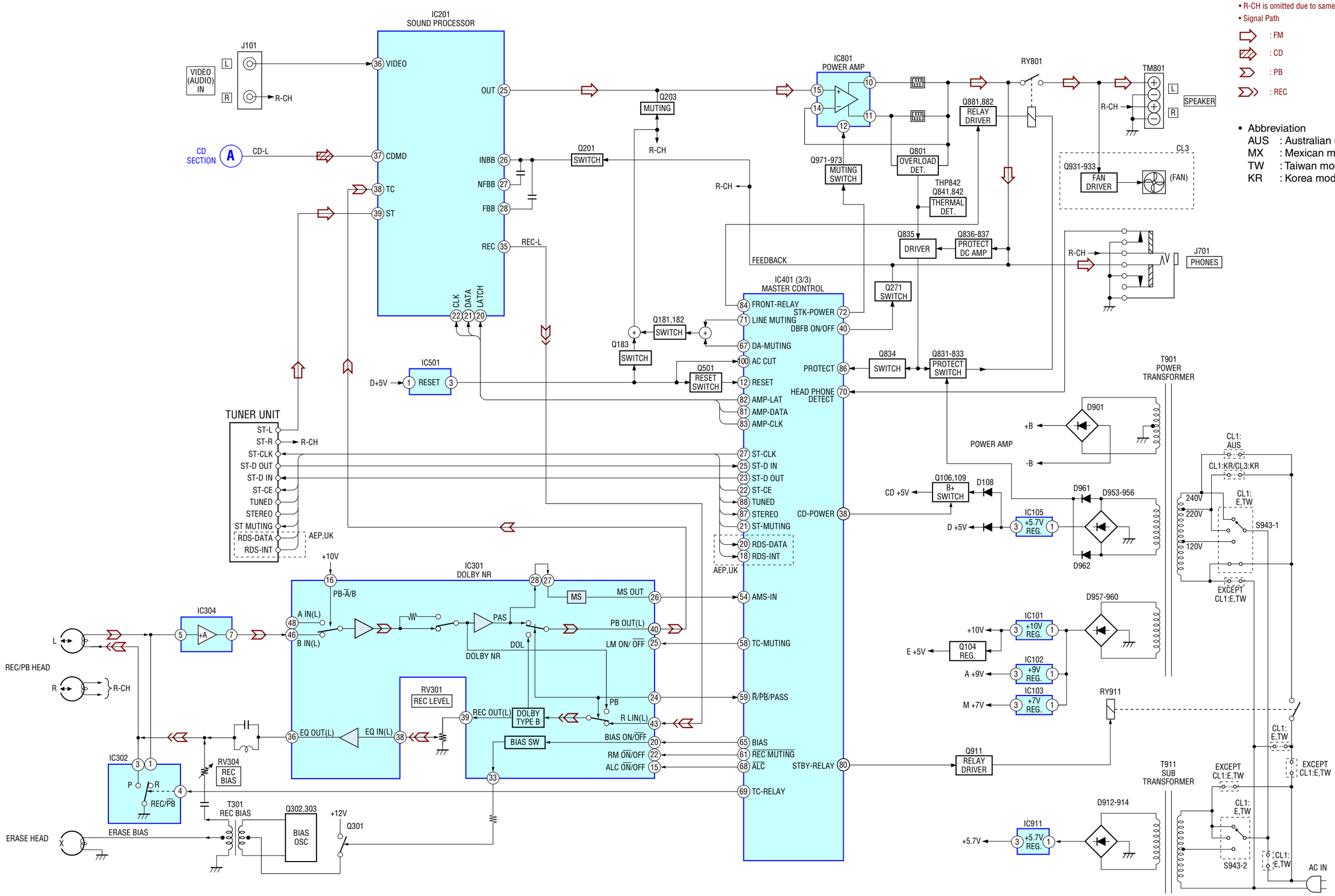
7-2. BLOCK DIAGRAMS
CD SECTION



SYSCON SECTION



MAIN SECTION



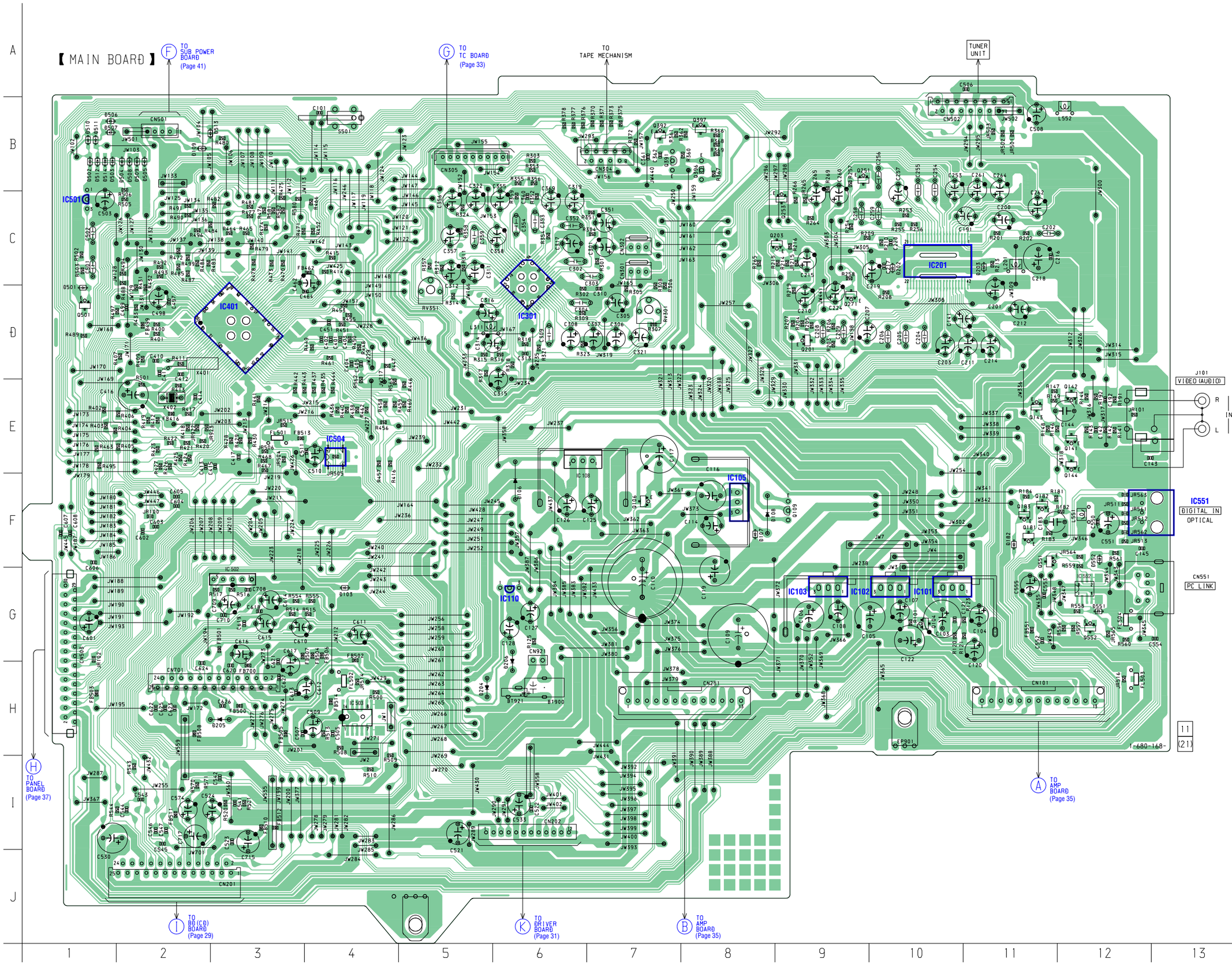
- R-CH is omitted due to same as L-CH.
- Signal Path
  - : FM
  - : CD
  - : PB
  - : REC

- Abbreviation
  - AUS : Australian model
  - MX : Mexican model
  - TW : Taiwan model
  - KR : Korea model

7-3. PRINTED WIRING BOARD MAIN SECTION

• See page 21 for Circuit Boards Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

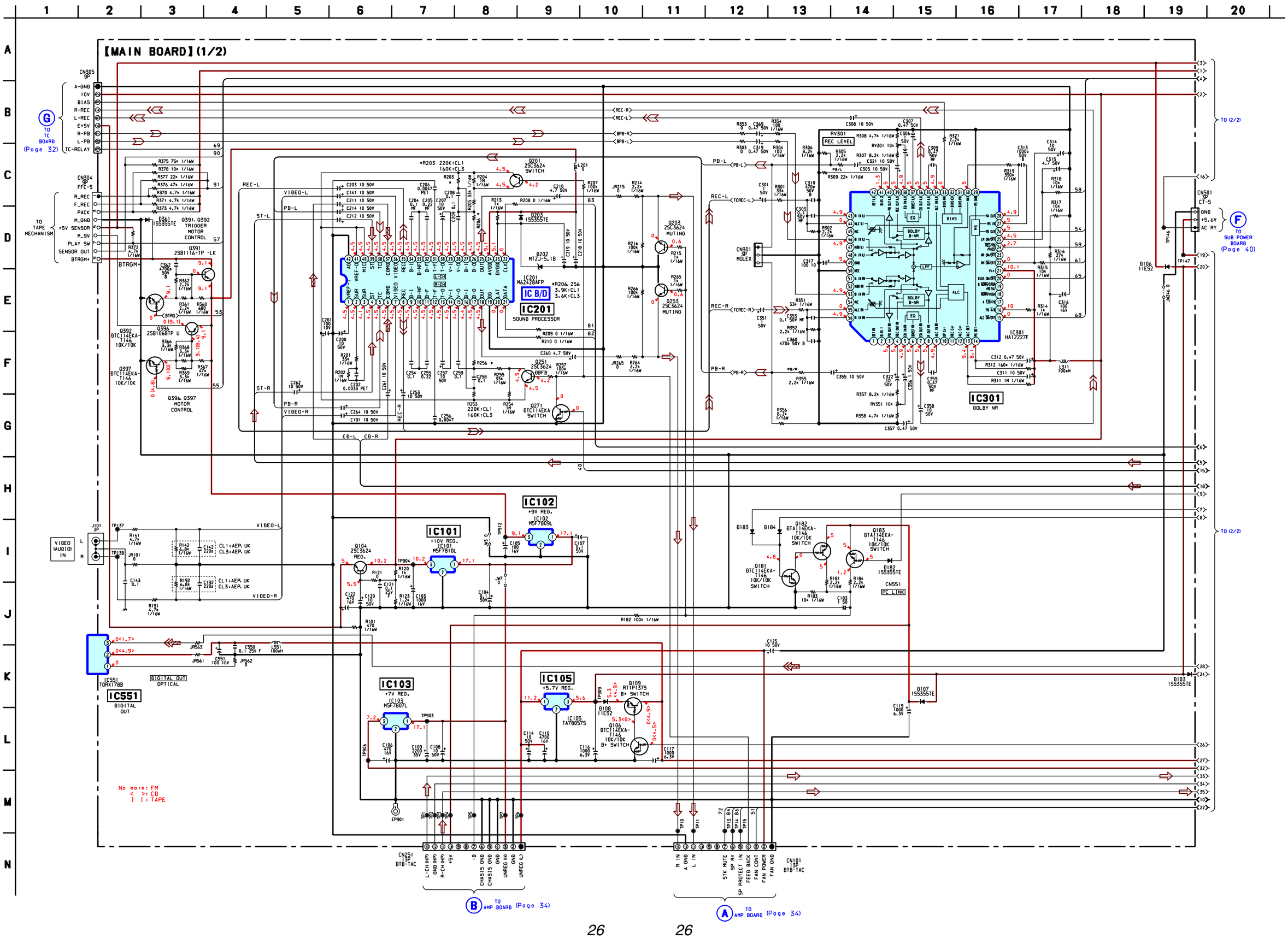


• **Semiconductor Location**

Ref. No.	Location
D103	G-4
D106	F-6
D107	F-8
D108	F-8
D182	F-11
D202	C-10
D203	C-11
D501	D-1
D502	B-1
D504	B-2
D505	B-2
D506	B-1
D507	B-1
D508	B-2
D509	B-2
D514	B-1
IC101	G-10
IC102	G-10
IC103	G-9
IC105	F-8
IC201	C-10
IC301	D-6
IC401	D-3
IC501	C-1
IC504	E-4
IC551	F-13
Q104	G-10
Q106	F-7
Q109	F-9
Q181	F-11
Q182	F-11
Q183	F-11
Q201	D-9
Q203	C-9
Q251	B-9
Q253	C-9
Q271	D-9
Q391	B-7
Q392	B-7
Q396	B-8
Q397	B-8
Q501	D-1

7-4. SCHEMATIC DIAGRAM MAIN SECTION (1/2)

• See page 45 for IC Block Diagram.



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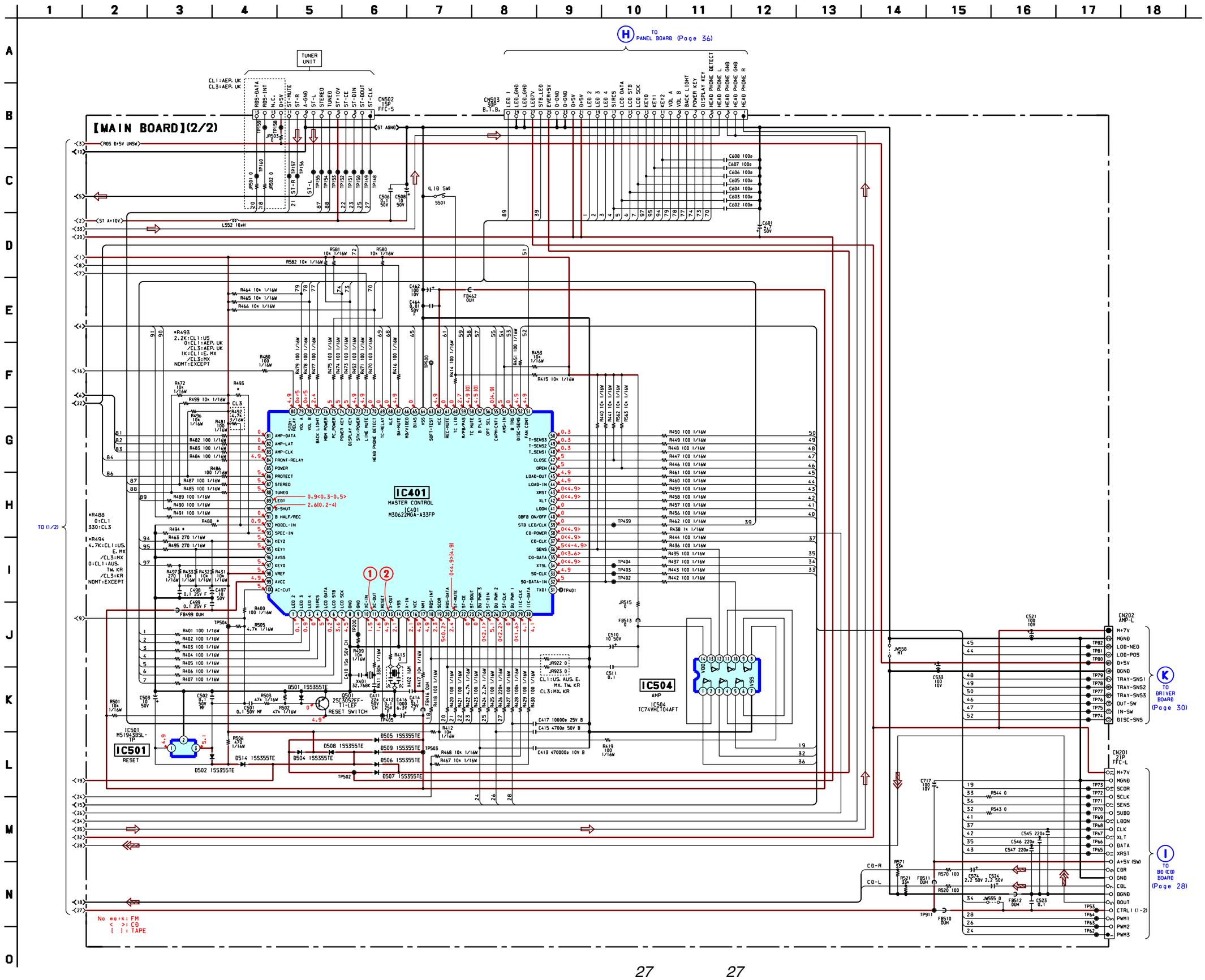
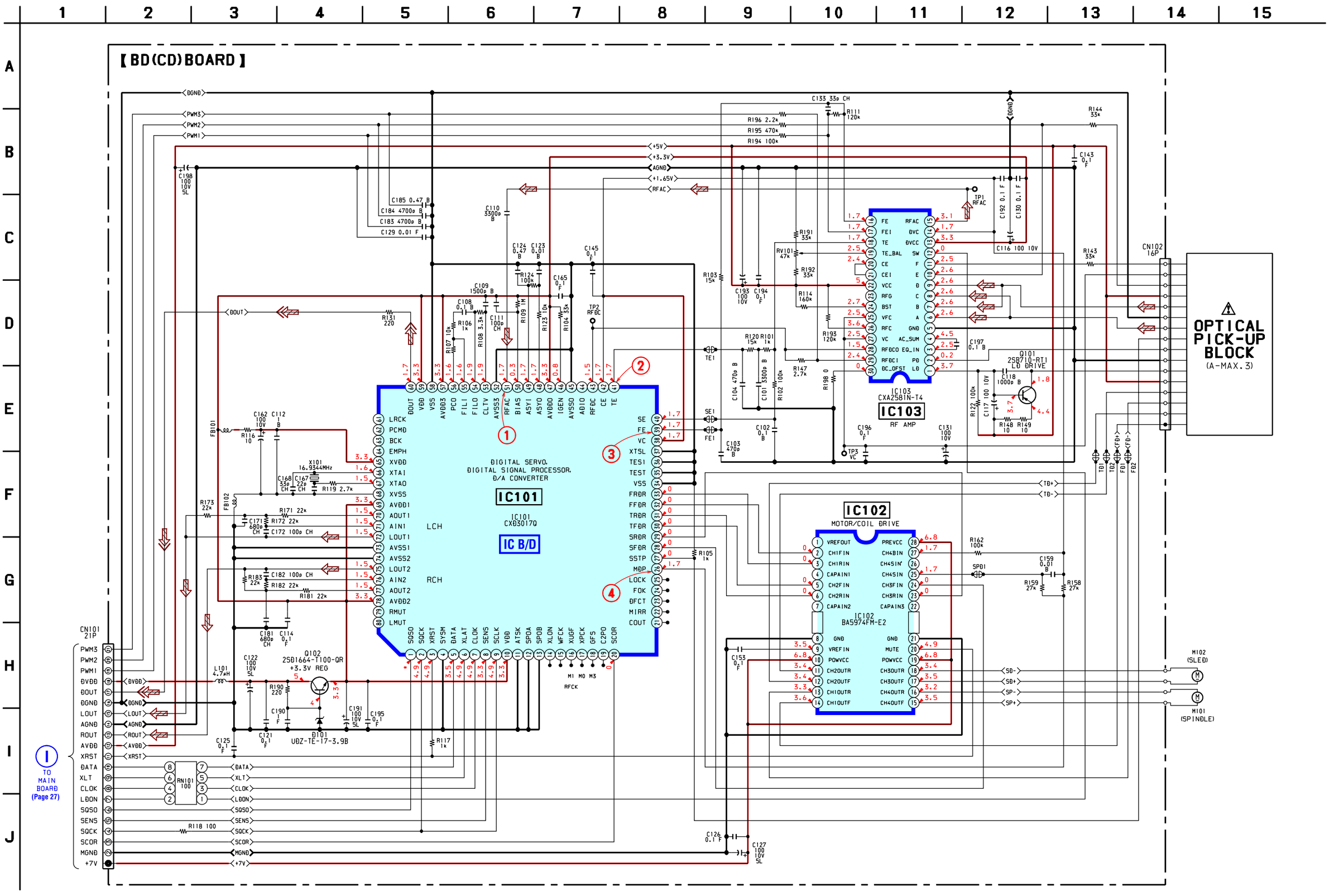
7-5. SCHEMATIC DIAGRAM MAIN SECTION (2/2)

• See page 42 for Waveforms.
• See page 42 for IC Pin Function Description.



7-6. SCHEMATIC DIAGRAM BD SECTION

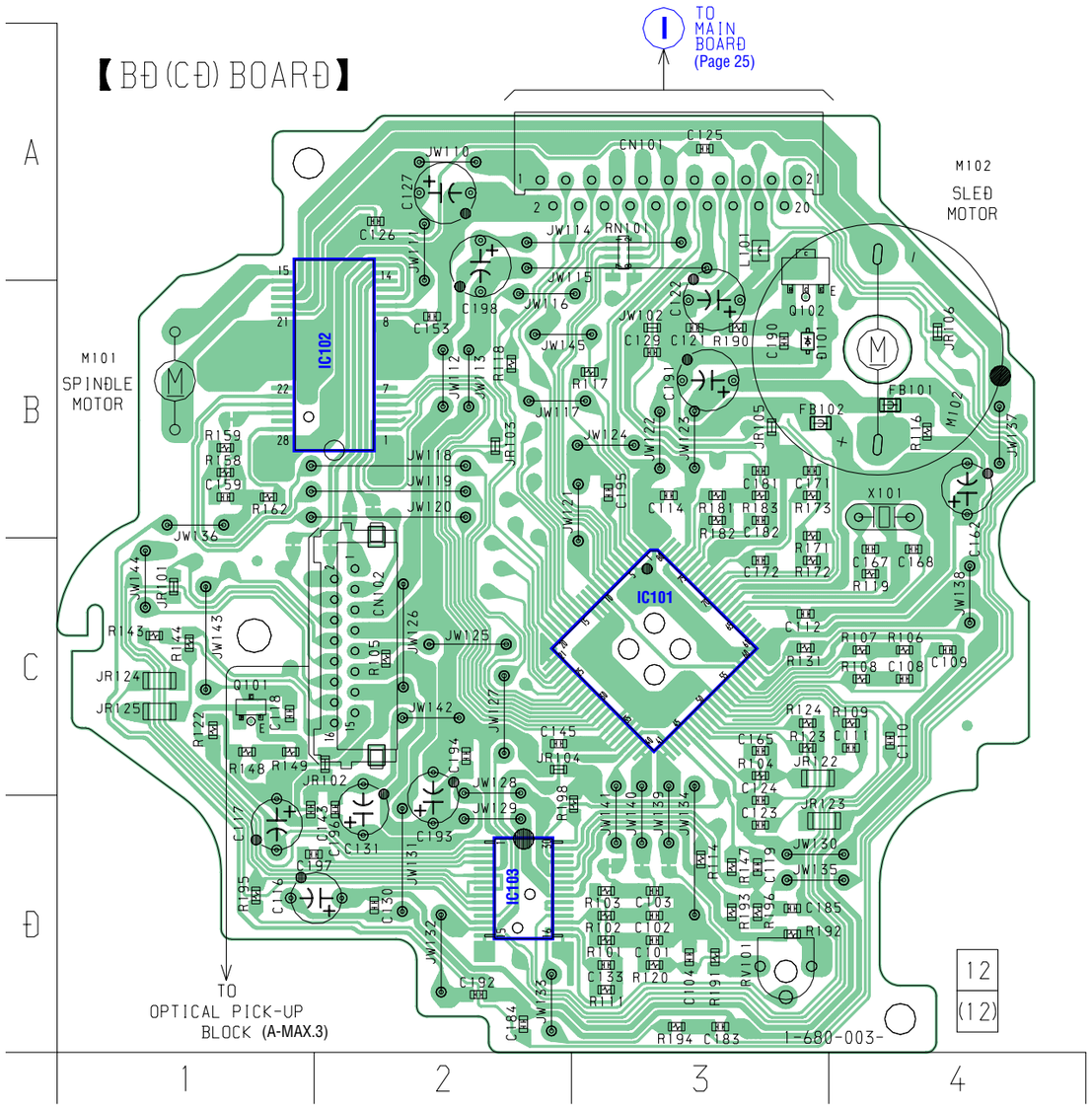
• See page 42 for Waveforms.
• See page 44 for IC Block Diagram.



7-7. PRINTED WIRING BOARD BD SECTION

• See page 21 for Circuit Boards Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

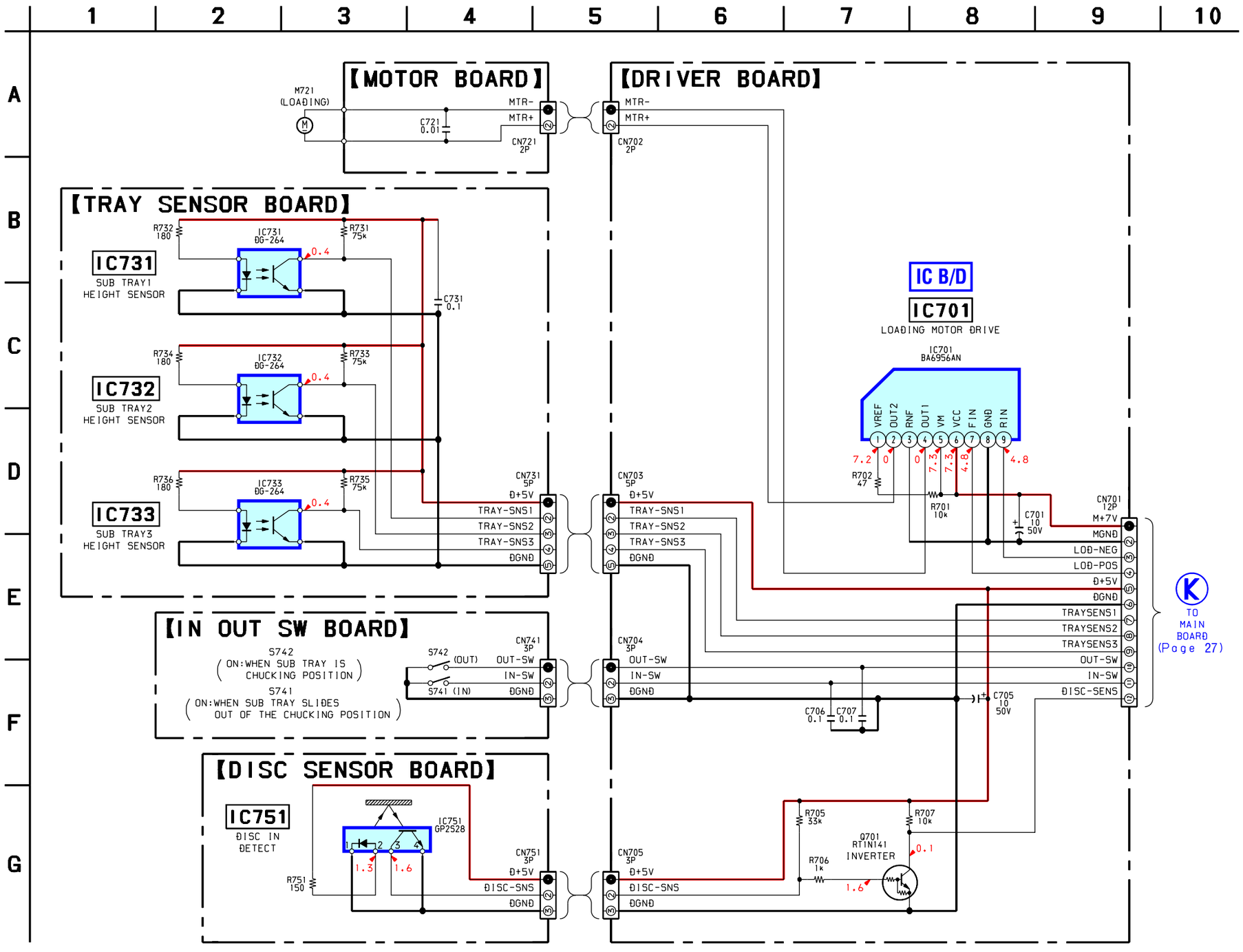


• **Semiconductor Location**

Ref. No.	Location
D101	B-3
IC101	C-3
IC102	B-2
IC103	D-2
Q101	C-1
Q102	A-3

7-8. SCHEMATIC DIAGRAM DRIVER SECTION

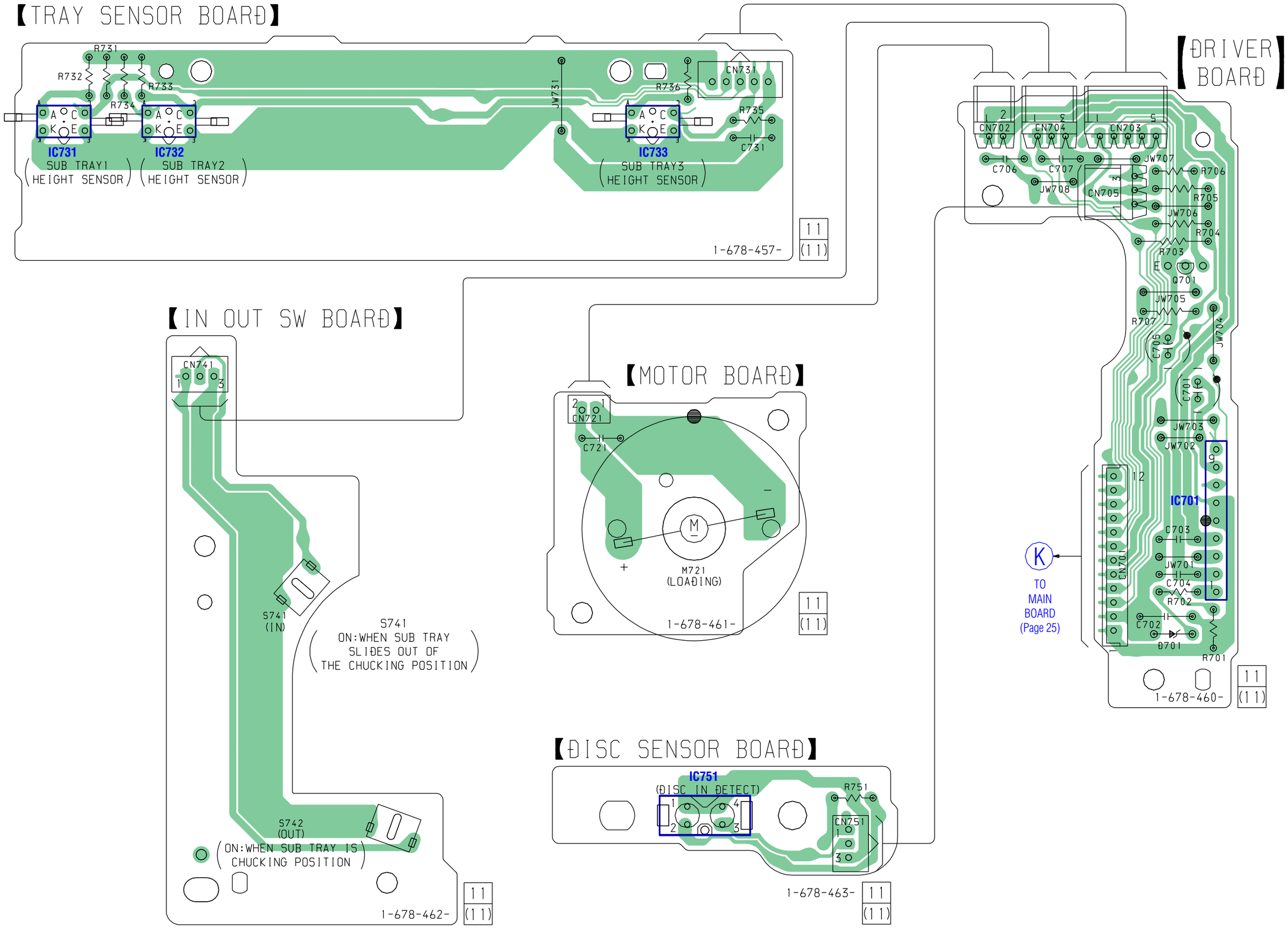
• See page 45 for IC Block Diagram.



7-9. PRINTED WIRING BOARD DRIVER SECTION

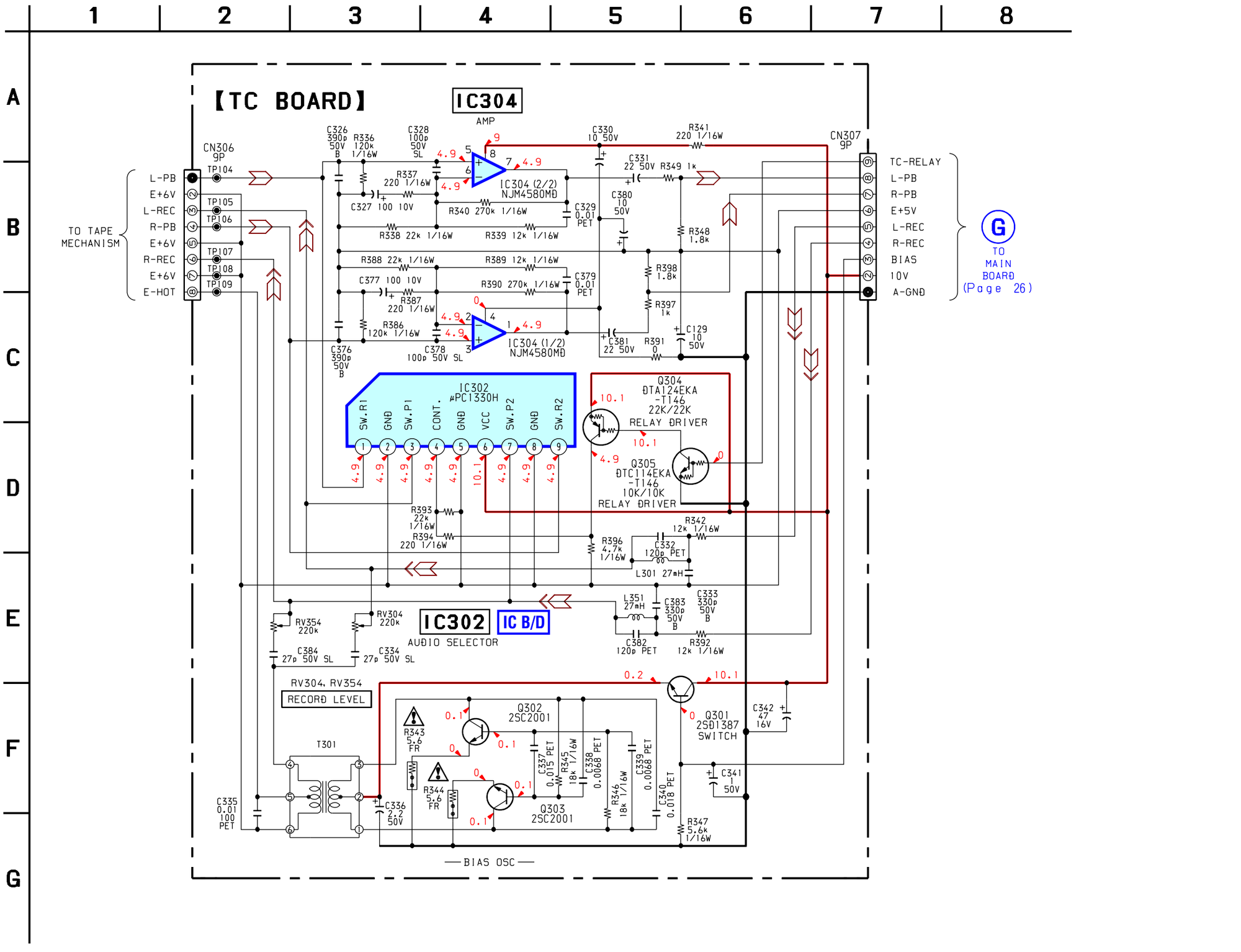
• See page 21 for Circuit Boards Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.



7-10. SCHEMATIC DIAGRAM TC SECTION

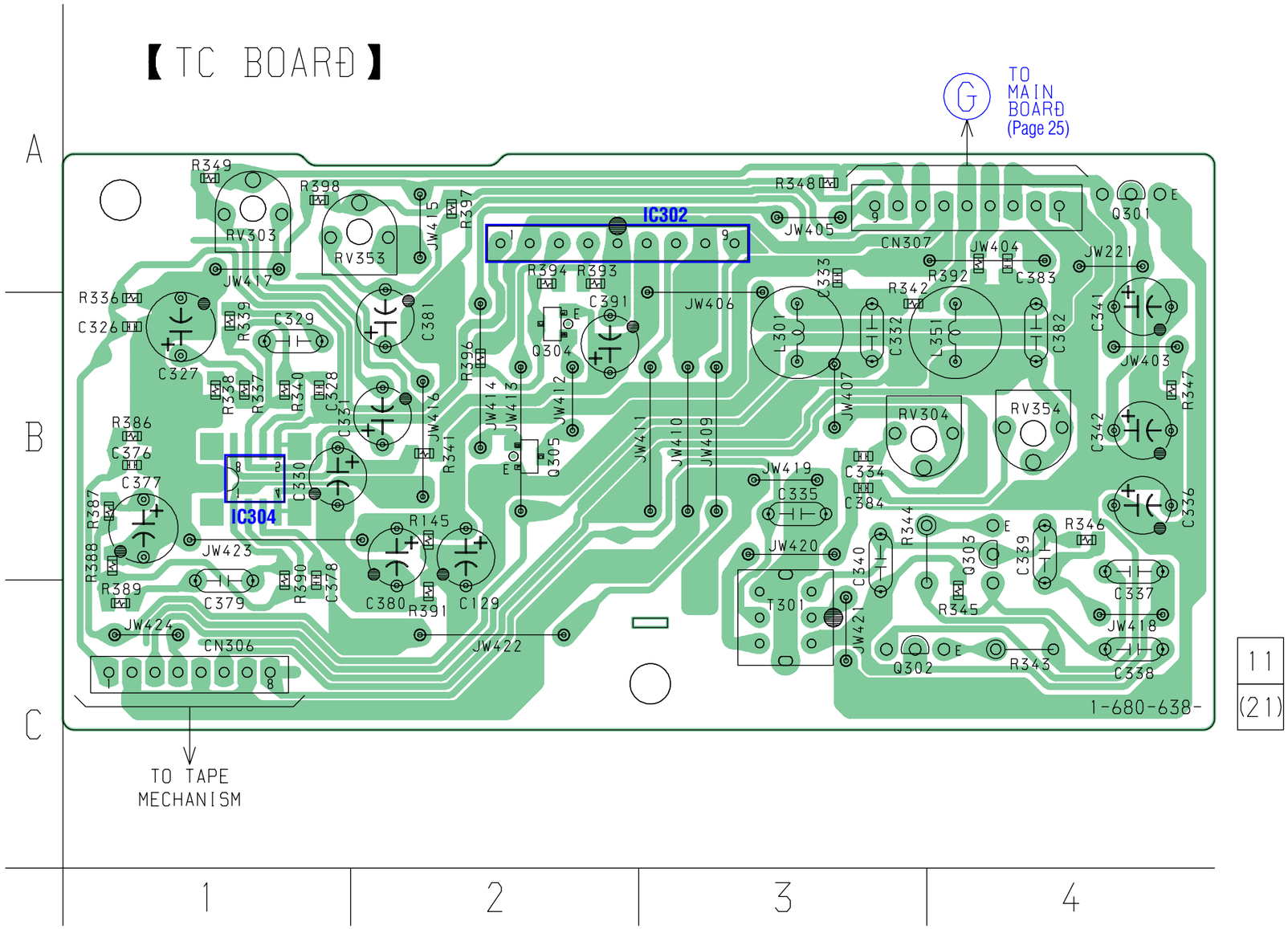
• See page 45 for IC Block Diagram.



7-11. PRINTED WIRING BOARD TC SECTION

• See page 21 for Circuit Boards Location.

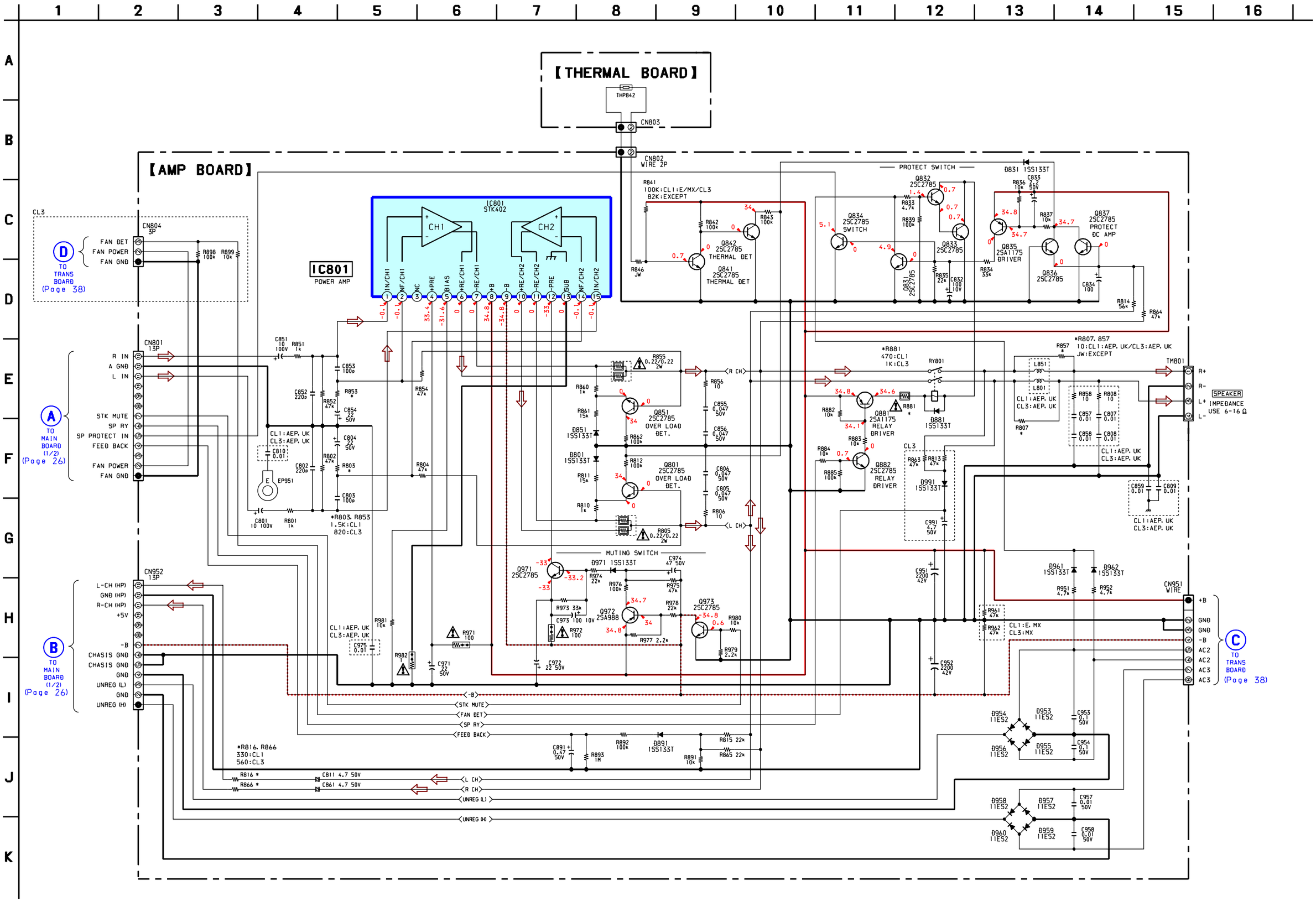
There are a few cases that the part printed on this diagram isn't mounted in this model.



• **Semiconductor Location**

Ref. No.	Location
IC302	A-3
IC304	B-1
Q301	A-4
Q302	C-3
Q303	B-4
Q304	B-2
Q305	B-2

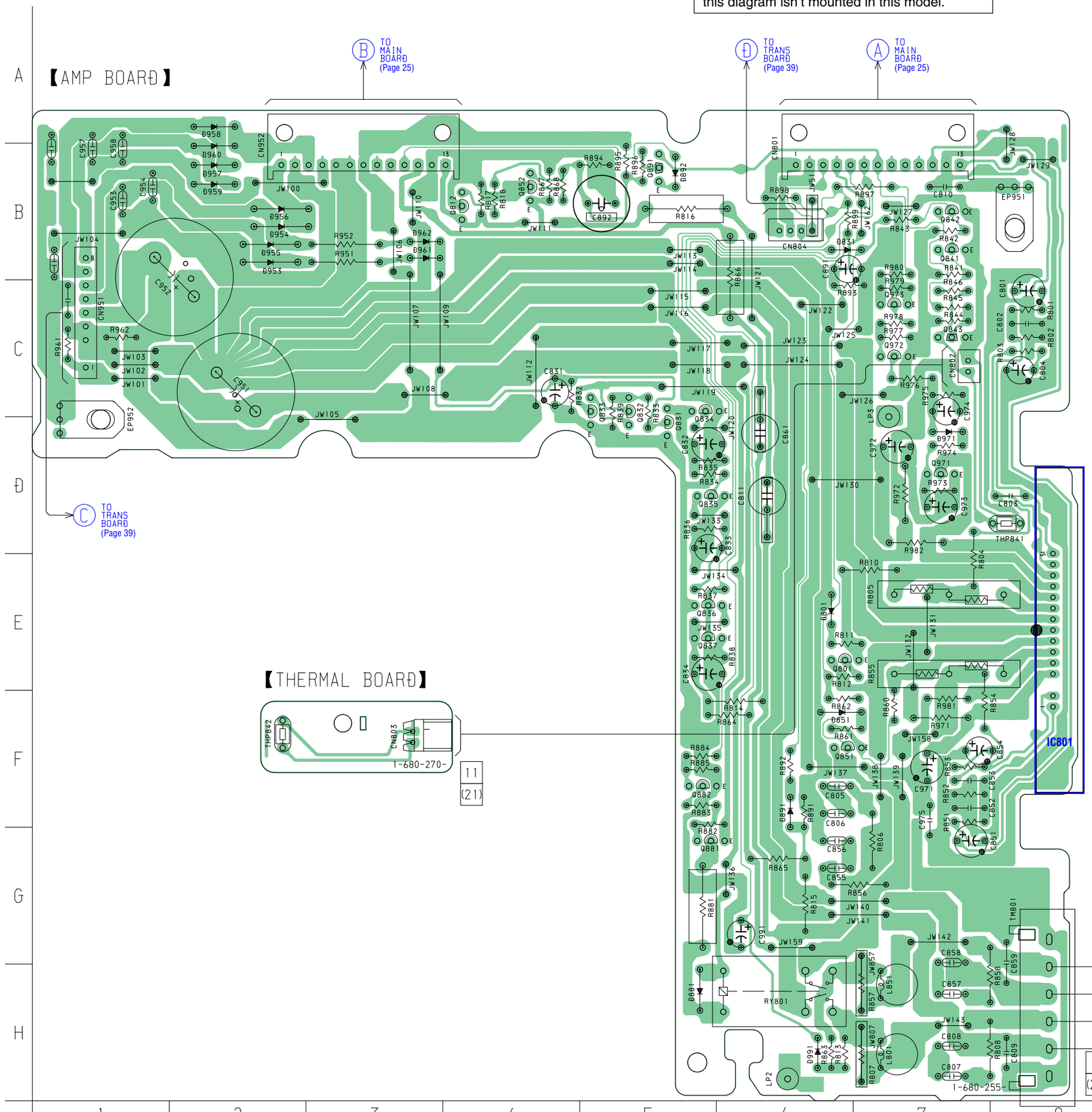
7-12. SCHEMATIC DIAGRAM AMP SECTION



7-13. PRINTED WIRING BOARD AMP SECTION

• See page 21 for Circuit Boards Location.

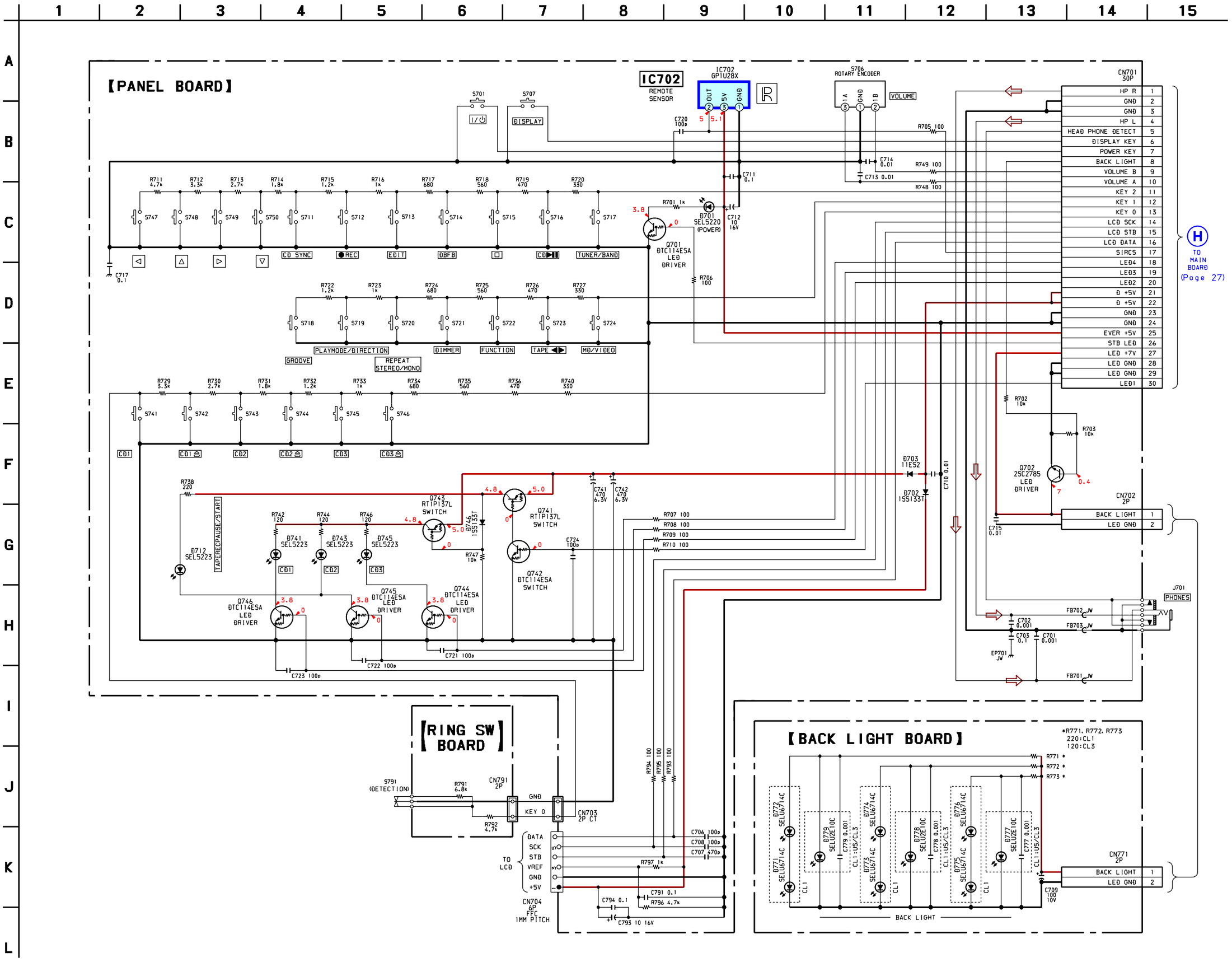
There are a few cases that the part printed on this diagram isn't mounted in this model.



• **Semiconductor Location**

Ref. No.	Location
D801	E-6
D831	B-7
D851	F-6
D881	H-5
D891	F-6
D953	B-2
D954	B-2
D955	B-2
D956	B-2
D957	B-2
D958	A-2
D959	B-2
D960	B-2
D961	B-3
D962	B-3
D971	D-7
D991	H-6
IC801	F-8
Q801	E-6
Q831	D-5
Q832	C-5
Q833	C-5
Q834	C-5
Q835	D-5
Q836	E-5
Q837	E-5
Q841	B-7
Q842	B-7
Q851	F-6
Q881	G-5
Q882	F-5
Q971	D-7
Q972	C-7
Q973	C-7

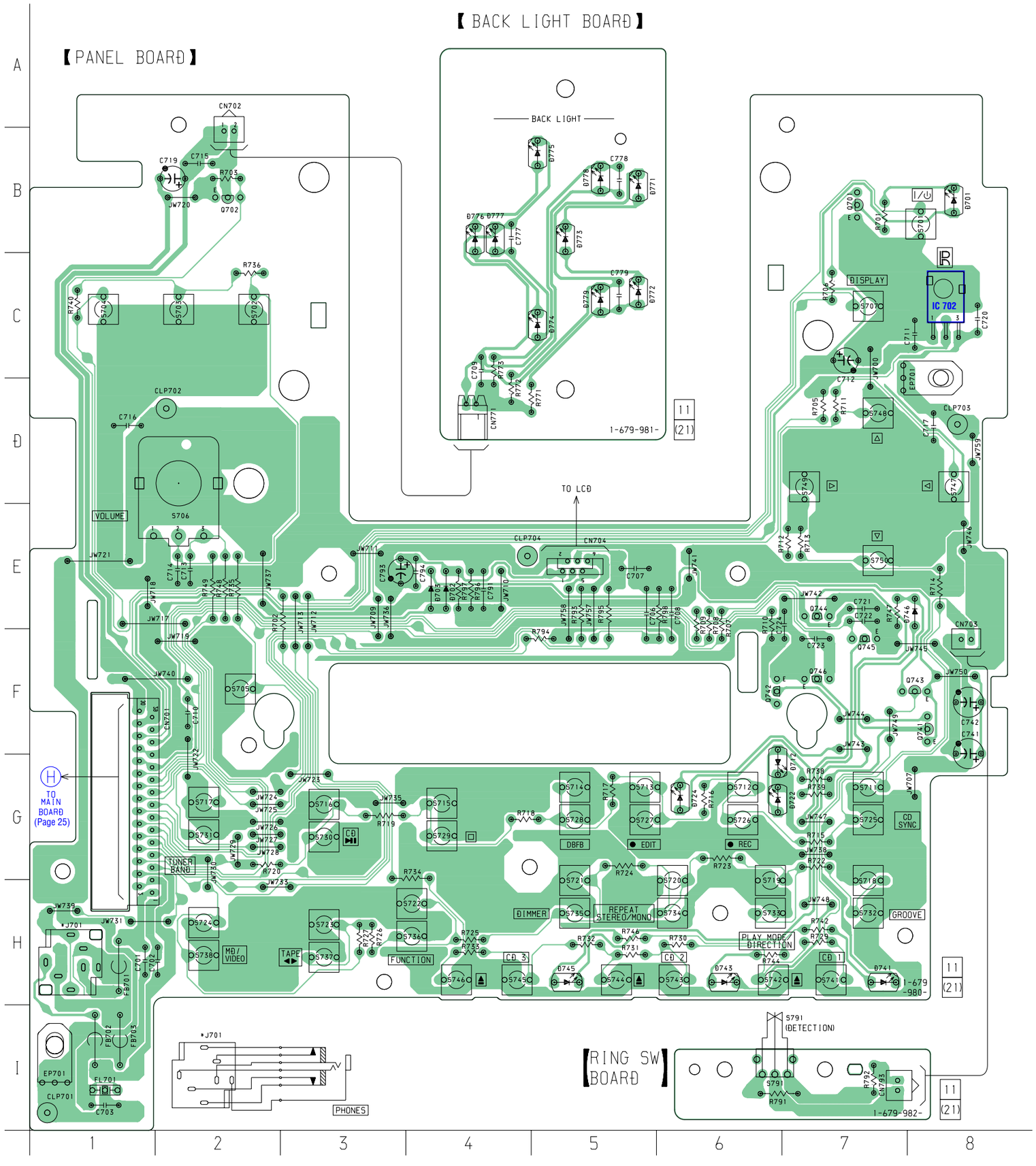
7-14. SCHEMATIC DIAGRAM PANEL SECTION



7-15. PRINTED WIRING BOARD PANEL SECTION

• See page 21 for Circuit Boards Location.

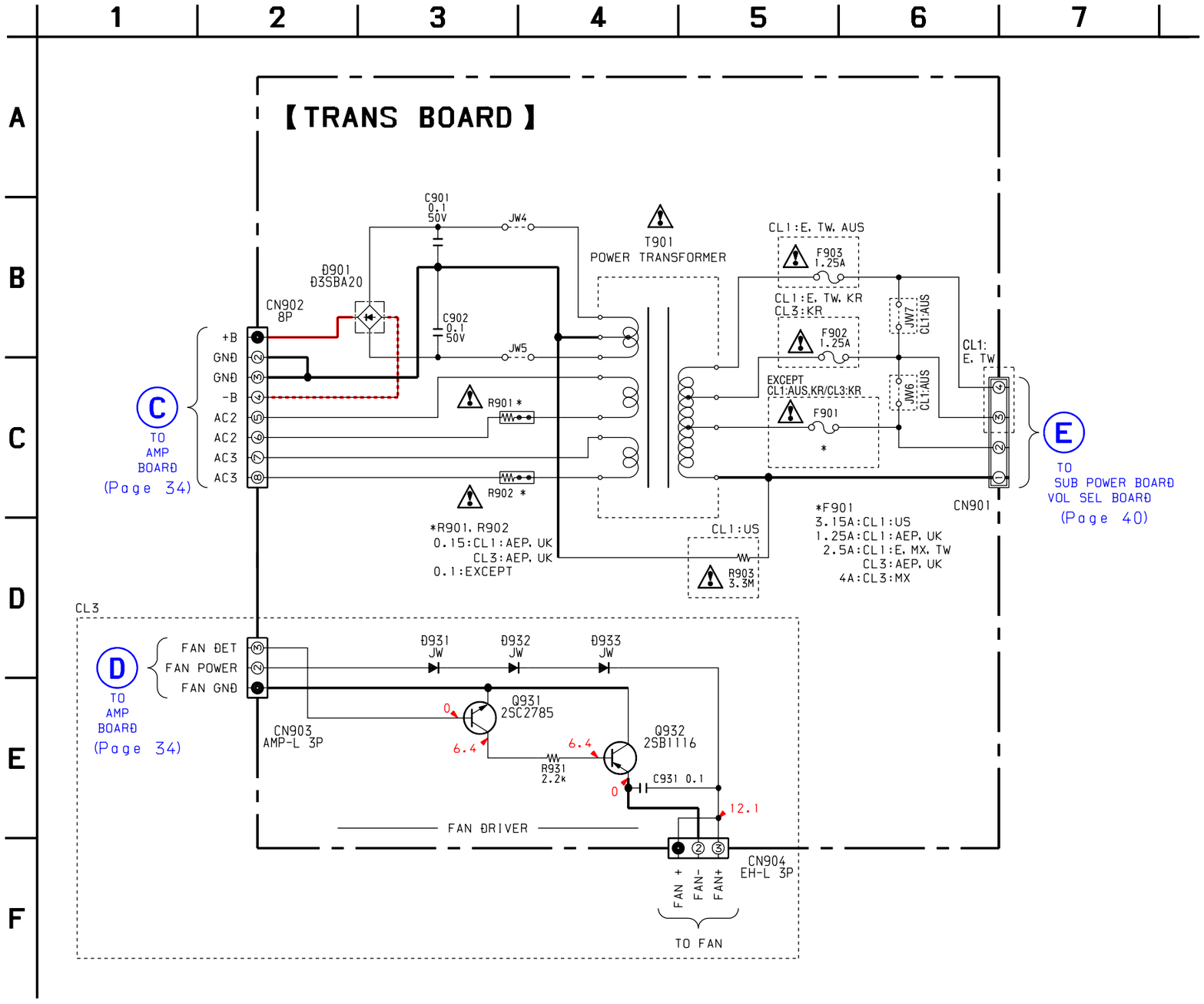
There are a few cases that the part printed on this diagram isn't mounted in this model.



• **Semiconductor Location**

Ref. No.	Location
D701	B-8
D702	E-4
D703	E-4
D712	G-6
D741	H-7
D743	H-6
D745	H-5
D746	E-8
D771	B-5
D772	C-5
D773	B-5
D774	C-5
D775	B-5
D776	B-4
D777	B-4
D778	B-5
D779	C-5
IC702	C-8
Q701	B-7
Q702	B-2
Q741	F-8
Q742	F-6
Q743	F-8
Q744	E-7
Q745	F-7
Q746	F-7

7-16. SCHEMATIC DIAGRAM TRANS SECTION

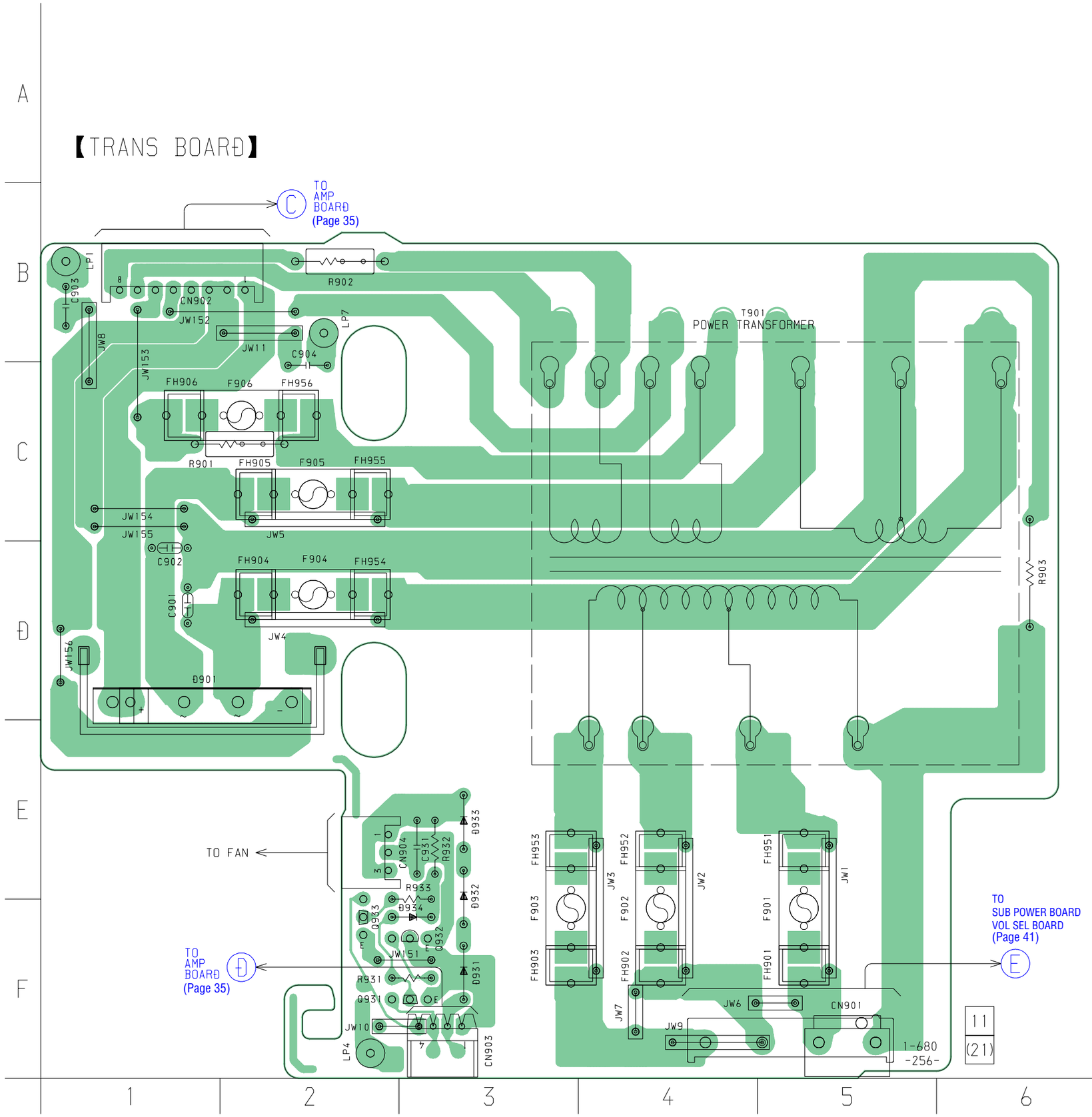


7-17. PRINTED WIRING BOARD TRANS SECTION

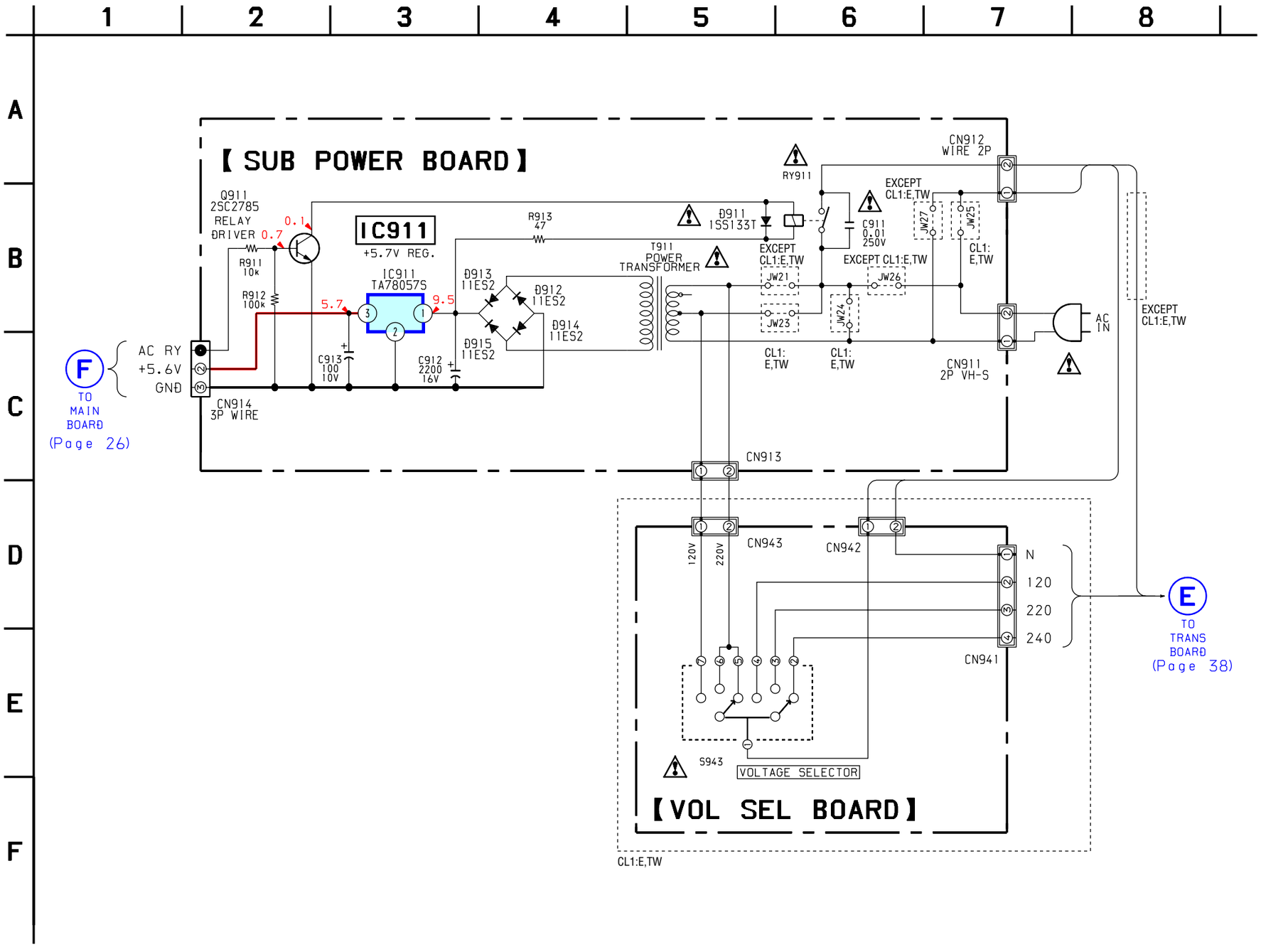
• See page 21 for Circuit Boards Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

【TRANS BOARD】



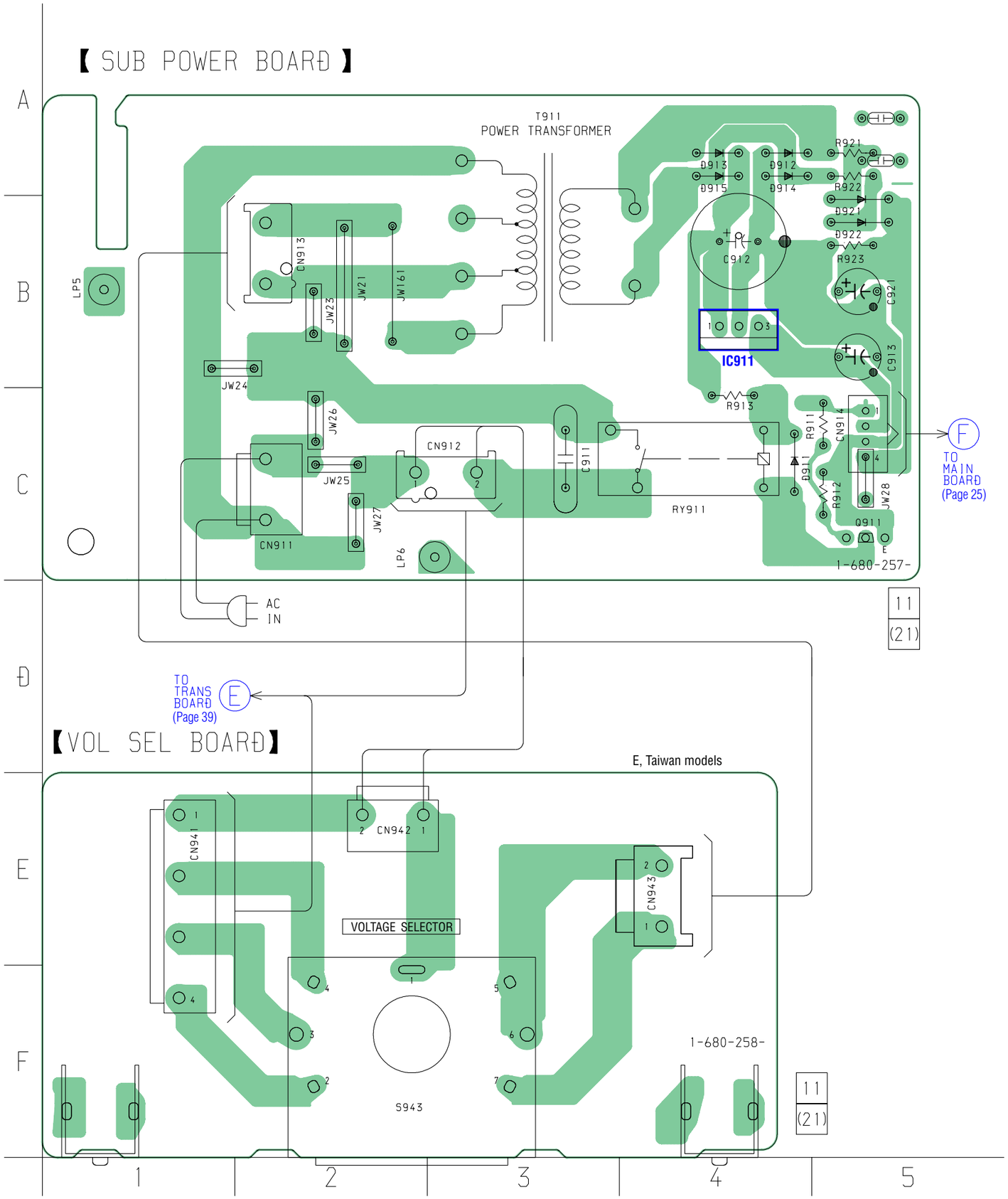
7-18. SCHEMATIC DIAGRAM POWER SECTION



7-19. PRINTED WIRING BOARD POWER SECTION

• See page 21 for Circuit Boards Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.

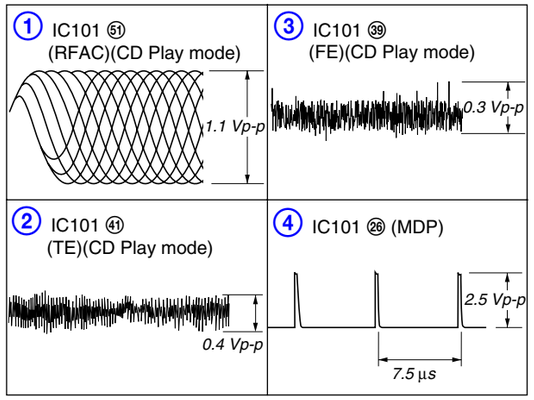


• **Semiconductor Location**

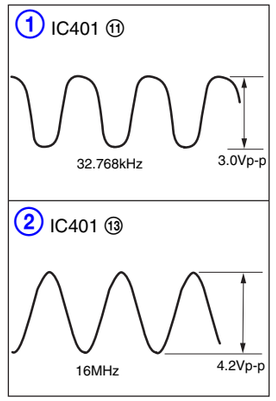
Ref. No.	Location
D911	C-4
D912	A-4
D913	A-4
D914	A-4
D915	A-4
IC911	B-4
Q911	C-5

• WAVEFORMS

– BD (CD) SECTION –



– MAIN SECTION –



7-20. IC PIN FUNCTION DESCRIPTION

• IC401 M30622MGA-A33FP MASTER CONTROL (MAIN BOARD)

Pin No.	Pin Name	I/O	Description
1	LED 2	O	LED control signal output
2	LED 3	O	LED control signal output
3	LED 4	O	LED control signal output
4	SIRCS	I	Remote control receiver data signal input
5	LCD DATA	O	LCD DATA signal output
6	LCD STB	O	LCD STB signal output
7	LCD SCK	O	LCD SCK signal output
8	N.C.	-	Connected to ground
9	N.C.	-	Connected to ground
10	XC-IN	I	Sub clock input
11	XC-OUT	O	Sub clock output
12	RESET	I	System reset input
13	X-OUT	O	Main system clock output
14	VSS	-	Ground
15	X-IN	I	Main system clock input
16	VCC	-	Power supply (+5V)
17	NMI	-	Not used (connected to Vcc)
18	RDS-INT	I	RDS interrupt signal input
19	SCOR	I	CD Q-data signal input
20	RDS-DATA	I	RDS data signal input
21	ST-MUTING	O	Tuner muting signal output
22	ST-CE	O	Tuner chip enable output
23	ST-DOUT	O	Tuner data signal output
24	BU PWM 3	O	BU PWM 3 signal output
25	ST-DIN	I	Tuner data signal input
26	BU PWM 2	O	BU PWM 2 signal output
27	ST-CLK	O	Tuner clock signal output
28	BU PWM 1	O	BU PWM 1 signal output
29	IIC-CLK	O	IIC SCL output
30	IIC-DATA	O	IIC SDA output
31	N.C.	-	Not used
32	SQ-DATA-IN	I	CD SQ data input
33	SQ-CLK	O	CD SQ clock output
34	XTSL	O	XTSL signsl output for IC101
35	CD-DATA	O	CD data signal output
36	SENS	I	BD condition signal input
37	CD-CLK	O	CD clock signal output
38	CD-POWER	O	CD power control signal output (H=ON,L=OFF)
39	STB LED/CLK	O	Standby LED ON/OFF signal output/Test point (clock check)
40	DBFB ON/OFF	O	DBFB control signal output (L=ON,H=OFF)
41	LDON	O	LDON signsl output for IC103
42	XLT	O	CD LAT signal output
43	XRST	O	CD reset signal output
44	LOAD-IN	O	Loading motor control signal output
45	LOAD-OUT	O	Loading motor control signal output
46	OPEN	I	Tray open detect signal input
47	CLOSE	I	Tray close detect signal input
48	T-SENS1	I	CD table detect signal input
49	T-SENS2	I	CD table detect signal input
50	T-SENS3	I	CD table detect signal input

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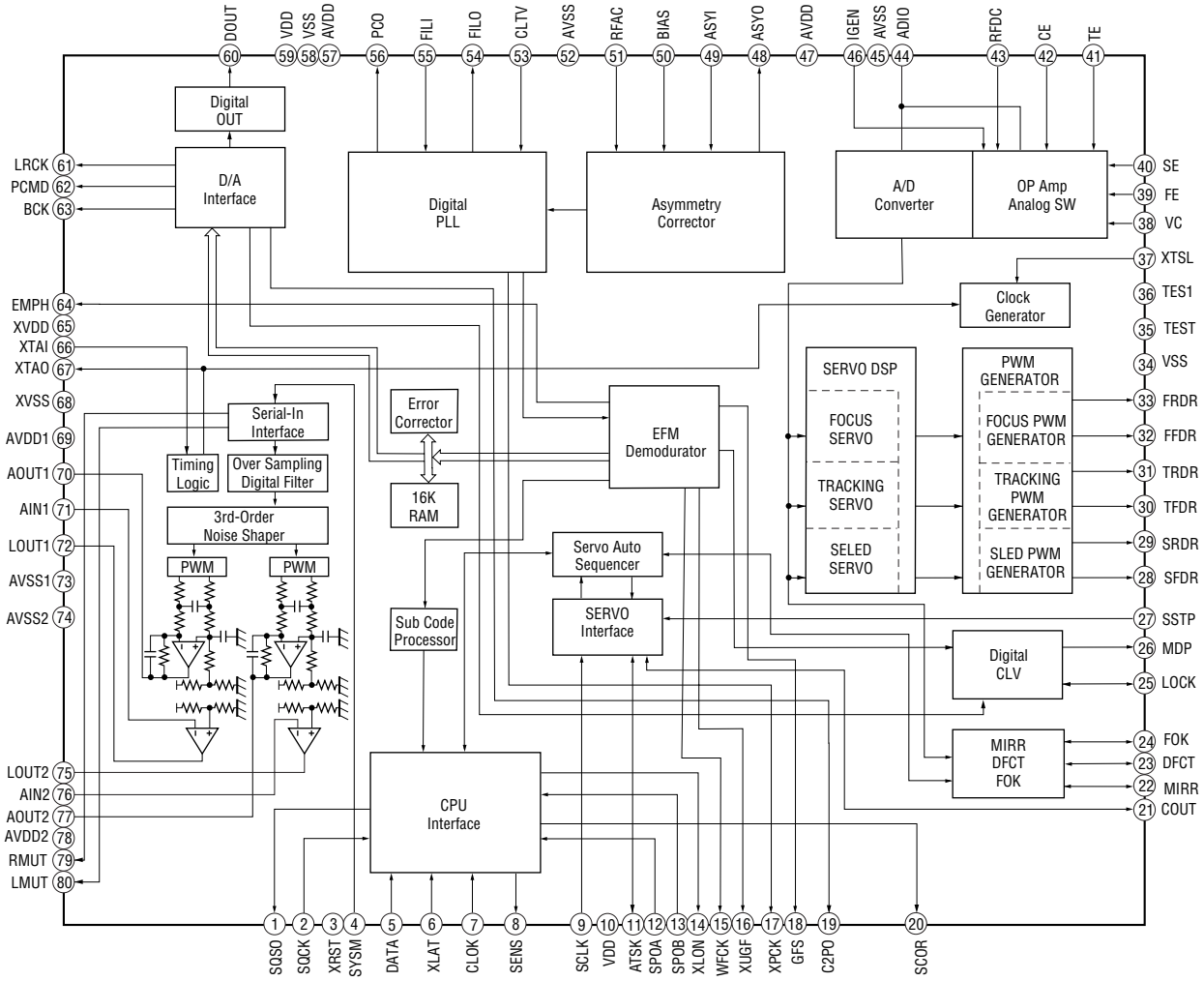
Pin No.	Pin Name	I/O	Description
51	FAN CNT	O	Fan control signal output
52	DISC-SENS	I	Detection input signal from DISC SENSOR BOARD
53	B TRG	O	B deck trigger control signal output
54	AMS-IN	I	AMS signal input (L=ON,H=OFF)
55	CAPM-CNT1	O	Capstan motor REV/FWD/STOP control signal output
56	OPT SEL	O	Optical select signal output
57	B PLAY	I	B deck play detect signal input
58	TC-MUTING	O	Tape deck line muting signal output (H=ON,L=OFF)
59	R/PB/PAS	I	REC/PB/PAS select signal input (L=REC,Z=PB,H=PAS)
60	TC LID	I	TC lid detect signal input
61	REC-MUTING	O	REC MUTING ON/OFF signal output (L=ON,H=OFF)
62	VCC	-	Power supply (+5V)
63	SOFT-TEST	O	Test point (soft check out)
64	VSS	-	Ground
65	BIAS	O	BIAS ON/OFF signal output (H=ON,L=OFF)
66	MD/VIDEO	O	Not used
67	DA-MUTING	O	DA muting control signal output
68	ALC	O	ALC ON/OFF signal output (L=ON,H=OFF)
69	TC-RELAY	O	Tape deck relay ON/OFF signal output (H=ON,L=OFF)
70	HEAD PHONE DETECT	I	HEAD PHONE detect signal input
71	LINE-MUTING	O	LINE muting ON/OFF signal output (H=ON,L=OFF)
72	STK-POWER	O	Power amplifier ON/OFF signal output (H=ON,L=OFF)
73	DISPLAYKEY	I	Display key detect signal input
74	POWER KEY	I	Power key detect signal input
75	PC_POWER	I	PC power detect signal from PC LINK
76	MDM POWER	O	MD P-DOWN control signal output
77	BACK LIGHT	O	Back light LED control signal output
78	VOL B	I	Volume signal input from rotary encoder
79	VOL A	I	Volume signal input from rotary encoder
80	STBY-RELAY	O	Standby relay ON/OFF signal output
81	AMP-DATA	O	DATA signal output for sound processor
82	AMP-LAT	O	LAT signal output for sound processor
83	AMP-CLK	O	CLK signal output for sound processor
84	FRONT-RELAY	O	Front speaker relay ON/OFF signal output (H=ON,L=OFF)
85	N.C.	-	Not used
86	PROTECT	I	Speaker protect ON/OFF signal input (L=ON,H=OFF)
87	STEREO	I	STEREO detect signal input (L=ON,H=OFF)
88	TUNED	I	TUNED detect signal input (L=ON,H=OFF)
89	LED 1	O	LED control signal output
90	B-SHUT	I	B deck reel pulse signal input
91	B HALF/REC	I	B deck half detect signal input
92	MODEL -IN	I	MODEL input
93	SPEC-IN	I	Version select input
94	KEY2	I	Key input signal from function key
95	KEY1	I	Key input signal from function key
96	AVSS	-	Analog ground
97	KEY0	I	Key input signal from function key
98	VREF	O	Analog reference voltage
99	AVCC	-	Analog power supply
100	AC-CUT	I	AC_CUT ON/OFF check (L=ON,H=OFF)

7-21. IC BLOCK DIAGRAMS

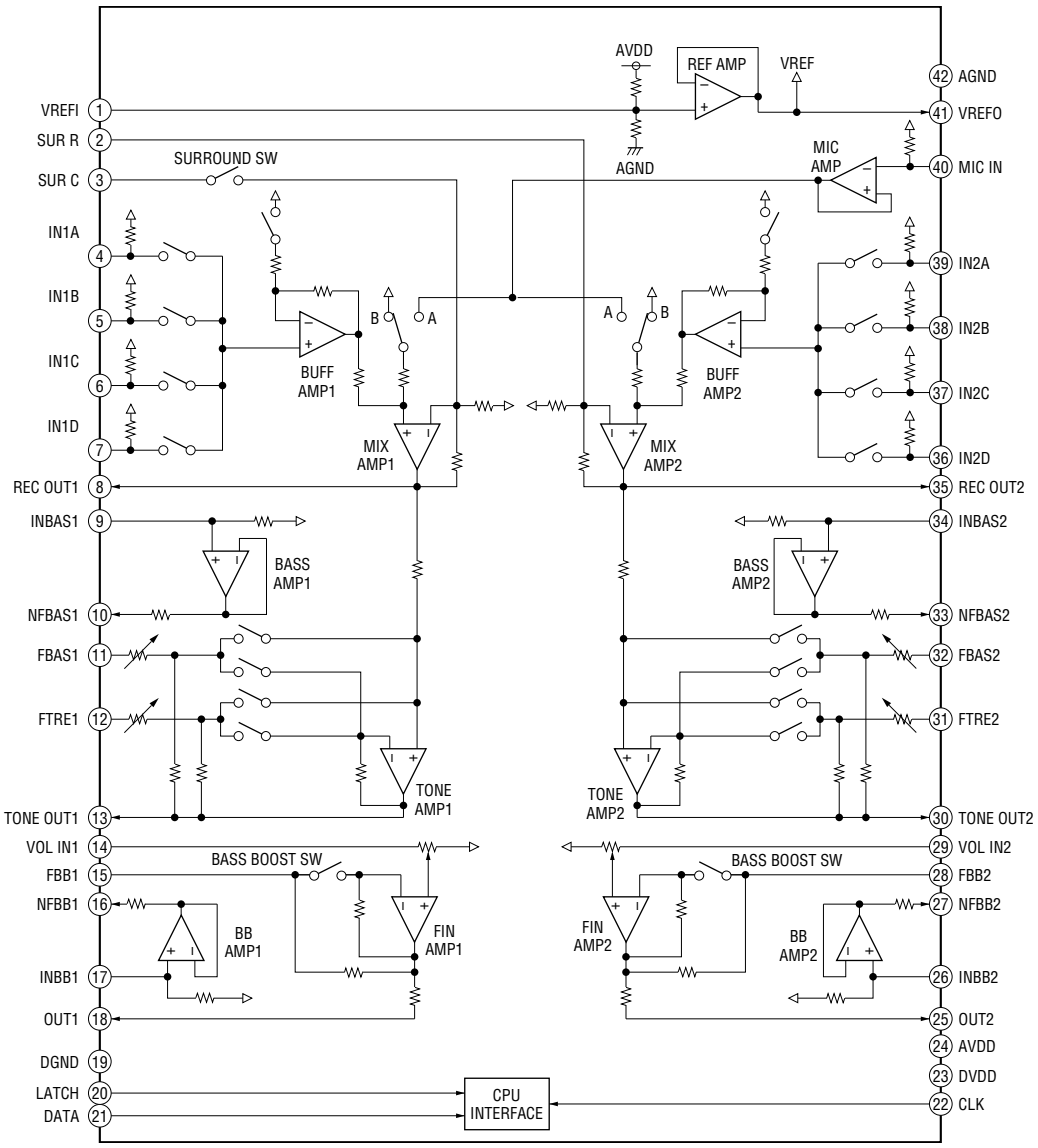
– BD (CD) BOARD –

IC101 CXD3017Q



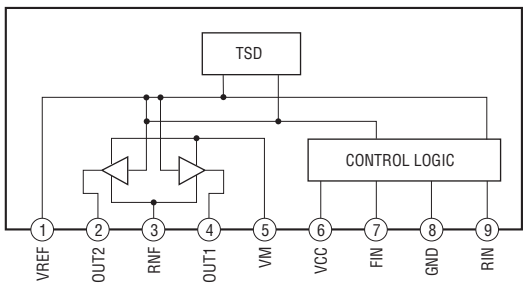
– MAIN BOARD –

IC201 M62428AFP600C



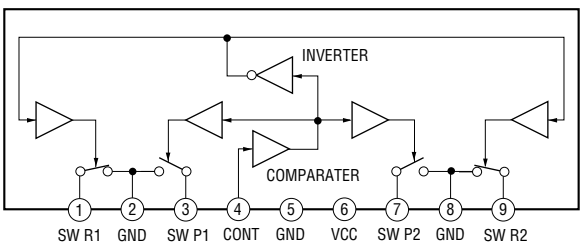
– DRIVER BOARD –

IC701 BA6956AN



– TC BOARD –

IC302 uPC1330HA



SECTION 8
EXPLODED VIEWS

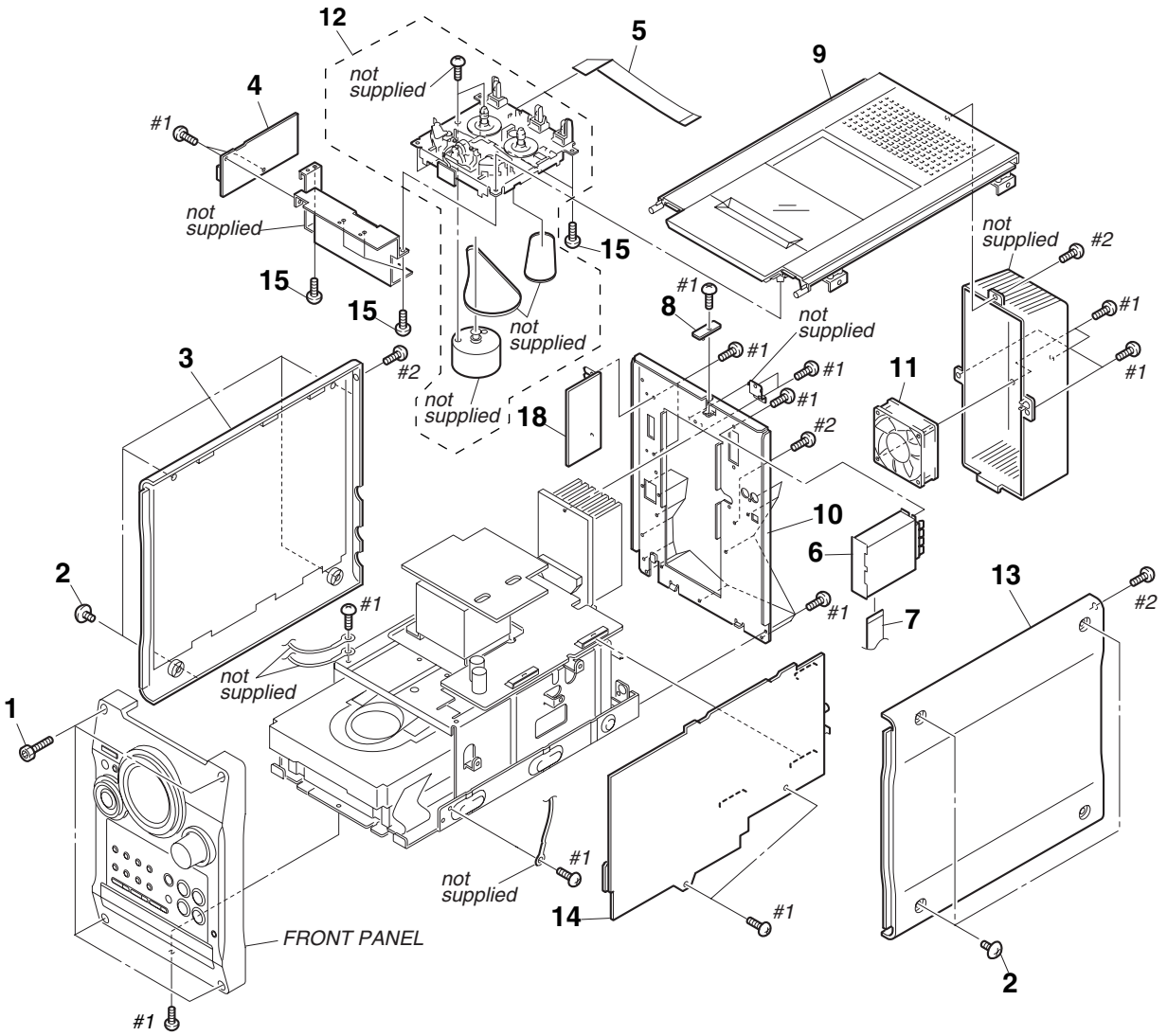
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts of Color Cabinet's Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

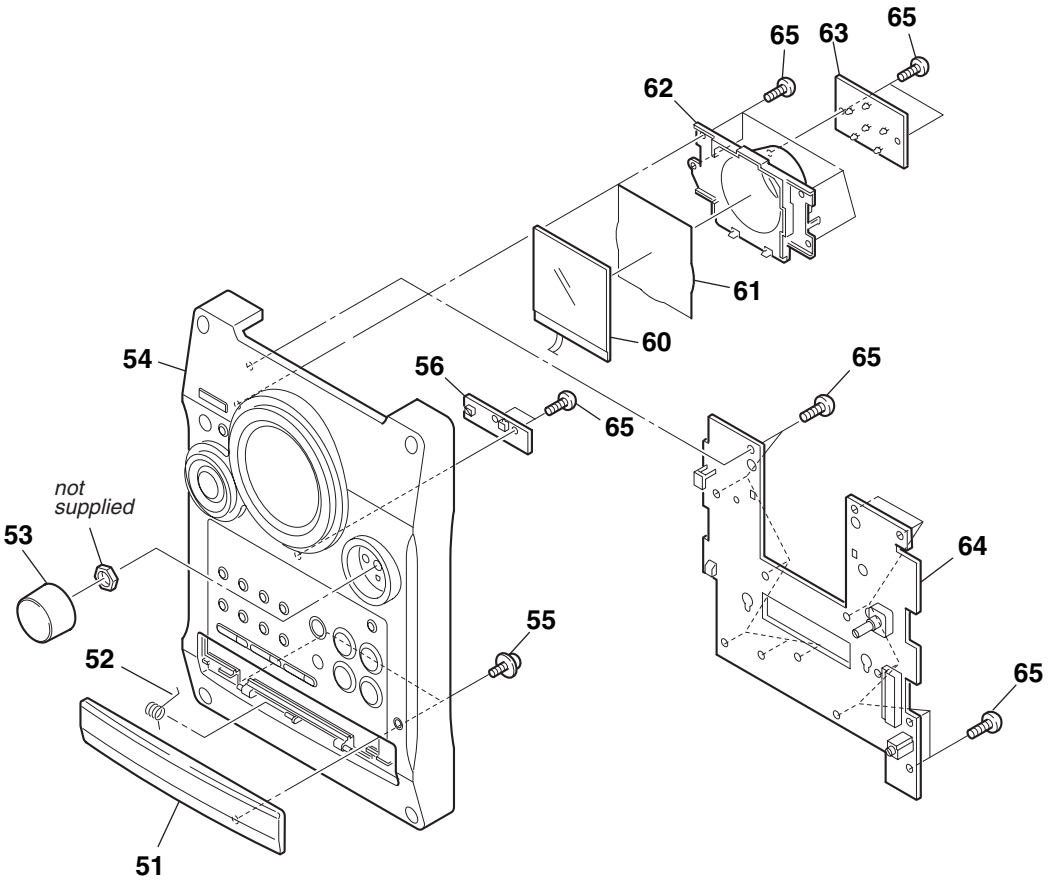
- Abbreviation
  AUS : Australian model
  MX : Mexican model
  TW : Taiwan model
  KR : Korea model

8-1. SIDE PANEL, BACK PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-232-226-01	SCREW, HEXAGON SOCKET TAPPING	
2	3-363-099-11	SCREW (CASE 3 TP2)	
3	4-231-649-01	PANEL (L), SIDE (SILVER) (CL1:AEP,UK,AUS,E51,MX,TW,KR)	
3	4-231-649-11	PANEL (L), SIDE (SILVER) (CL1:US)	
3	4-231-649-21	PANEL (L), SIDE (BLACK) (CL3)	
3	4-231-649-31	PANEL (L), SIDE (BLACK) (CL1:US)	
4	A-4476-076-A	TC BOARD, COMPLETE	
5	1-769-910-11	WIRE (FLAT TYPE) (9 CORE)	
6	1-693-530-81	TUNER (FM/AM) (CL1:US)	
6	1-693-531-81	TUNER (FM/AM) (CL1:AUS,MX,TW/CL3:MX)	
6	1-693-529-41	TUNER (FM/AM) (CL1:AEP,UK/CL3:AEP,UK)	
6	1-693-537-81	TUNER (CL1:E)	
6	1-693-538-81	TUNER (CL1:KR/CL3:KR)	
7	1-769-944-11	WIRE (FLAT TYPE) (11 CORE) (CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)	
7	1-773-008-11	WIRE (FLAT TYPE) (15 CORE) (CL1:AEP,UK/CL3:AEP,UK)	
8	1-680-270-11	THERMAL BOARD	
9	X-4953-318-1	PANEL ASSY, TOP (SILVER) (CL1:AEP,UK,AUS,E,MX,TW,KR)	
9	X-4953-349-1	PANEL ASSY, TOP (SILVER) (CL1:US)	
9	X-4953-658-1	PANEL ASSY, TOP (BLACK) (CL3)	
9	X-4953-663-1	PANEL ASSY, TOP (BLACK) (CL1:US)	
10	4-231-656-01	PANEL, BACK (CL3:AEP,UK)	
10	4-231-656-21	PANEL, BACK (CL3:KR)	
10	4-231-677-01	PANEL, BACK (CL1:AEP,UK)	
10	4-231-677-11	PANEL, BACK (CL1:US)	
10	4-231-677-21	PANEL, BACK (CL1:MX)	
10	4-231-677-31	PANEL, BACK (CL1:AUS)	
10	4-231-677-71	PANEL, BACK (CL1:TW)	
10	4-231-677-81	PANEL, BACK (CL1:KR)	
10	4-231-656-31	PANEL, BACK (CL3:MX)	
10	4-231-677-91	PANEL, BACK (CL1:E)	
11	1-763-072-11	FAN, D.C. (CL3)	
12	A-2100-929-A	TAPE MECHANISM UNIT (TCM-230ASR41CL)	
13	4-231-650-01	PANEL (R), SIDE (SILVER) (CL1:AEP,UK,AUS,E51,MX,TW,KR)	
13	4-231-650-11	PANEL (R), SIDE (SILVER) (CL1:US)	
13	4-231-650-21	PANEL (R), SIDE (BLACK) (CL3)	
13	4-231-650-31	PANEL (R), SIDE (BLACK) (CL1:US)	
14	A-4475-419-A	MAIN BOARD, COMPLETE (CL1:US)	
14	A-4475-433-A	MAIN BOARD, COMPLETE (CL1:AEP,UK)	
14	A-4475-444-A	MAIN BOARD, COMPLETE (CL1:AUS,TW,KR)	
14	A-4475-450-A	MAIN BOARD, COMPLETE (CL3:AEP,UK)	
14	A-4475-462-A	MAIN BOARD, COMPLETE (CL3:KR)	
14	A-4476-083-A	MAIN BOARD, COMPLETE (CL1:E,MX)	
14	A-4726-257-A	MAIN BOARD, COMPLETE (CL3:MX)	
15	4-951-620-01	SCREW (2.6X8), +BVTP	
18	1-680-258-11	VOL SEL BOARD (CL1:E,TW)	

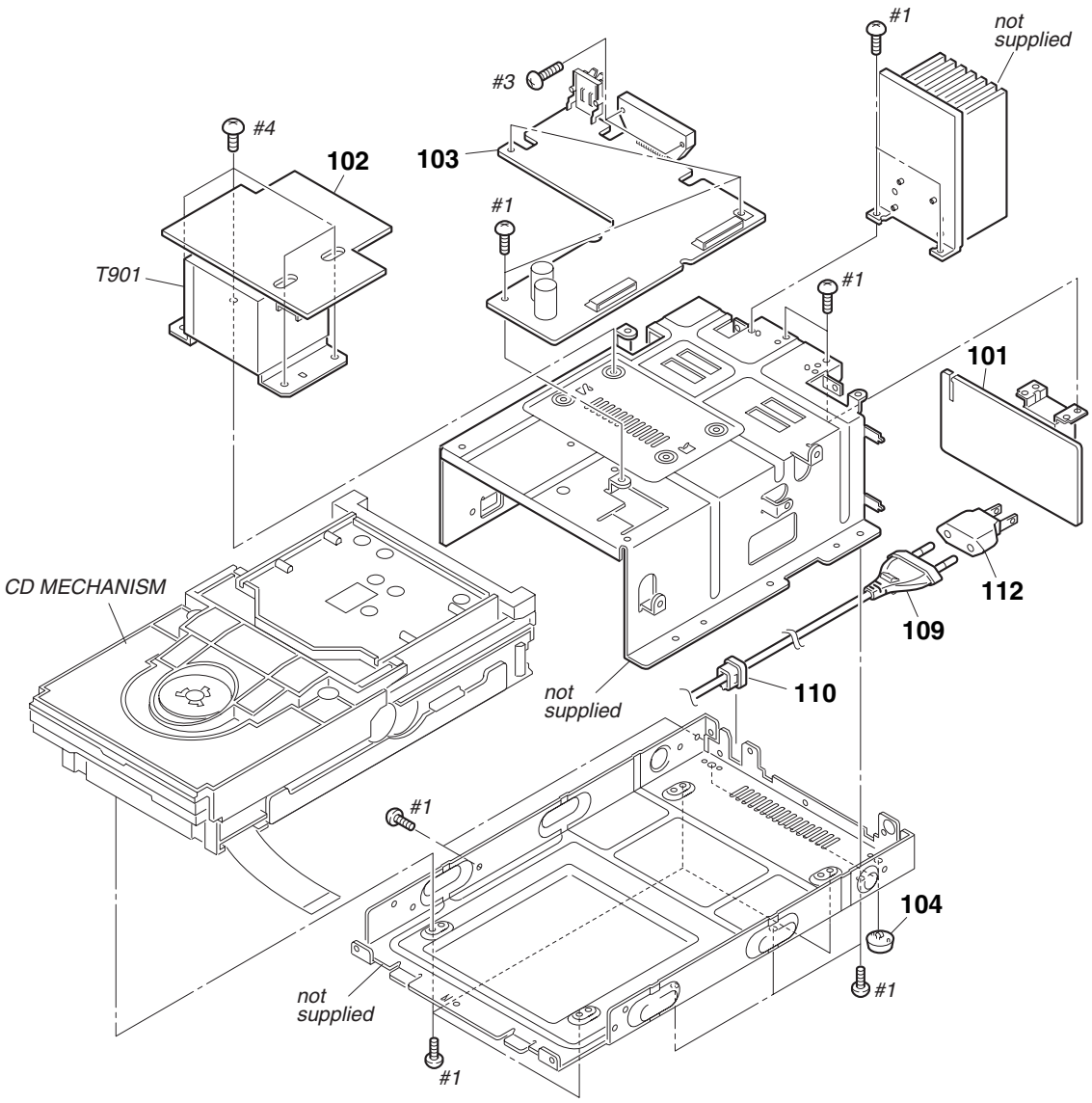
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-231-633-01	LID (CD) (SILVER)	
51	4-231-633-11	LID (CD) (BLACK)	
52	4-231-670-01	SPRING (CD)	
53	4-231-646-01	KNOB, VOLUME	
54	X-4953-315-1	PANEL ASSY, FRONT (SILVER) (CL1:AEP,UK)	
54	X-4953-316-1	PANEL ASSY, FRONT (SILVER) (CL1:US)	
54	X-4953-317-1	PANEL ASSY, FRONT (SILVER) (CL1:AUS,E,MX,TW,KR)	
54	X-4953-320-1	PANEL ASSY, FRONT (SILVER) (CL3:AEP,UK)	
54	X-4953-322-1	PANEL ASSY, FRONT (SILVER) (CL3:MX,KR)	

Ref. No.	Part No.	Description	Remarks
54	X-4953-804-1	PANEL ASSY, FRONT (BLACK) (CL1:US)	
55	4-933-134-41	SCREW (+PTPWH 2.6X5)	
56	1-679-982-11	RING SWITCH BOARD	
60	1-804-260-11	DISPLAY PANEL, LIQUID CRYSTAL	
61	4-231-637-01	SHEET, DIFFUSION	
62	4-231-636-01	HOLDER, LCD	
63	1-679-981-11	BACK LIGHT BOARD	
64	A-4475-428-A	PANEL BOARD, COMPLETE	
65	4-951-620-01	SCREW (2.6X8), +BVTP	

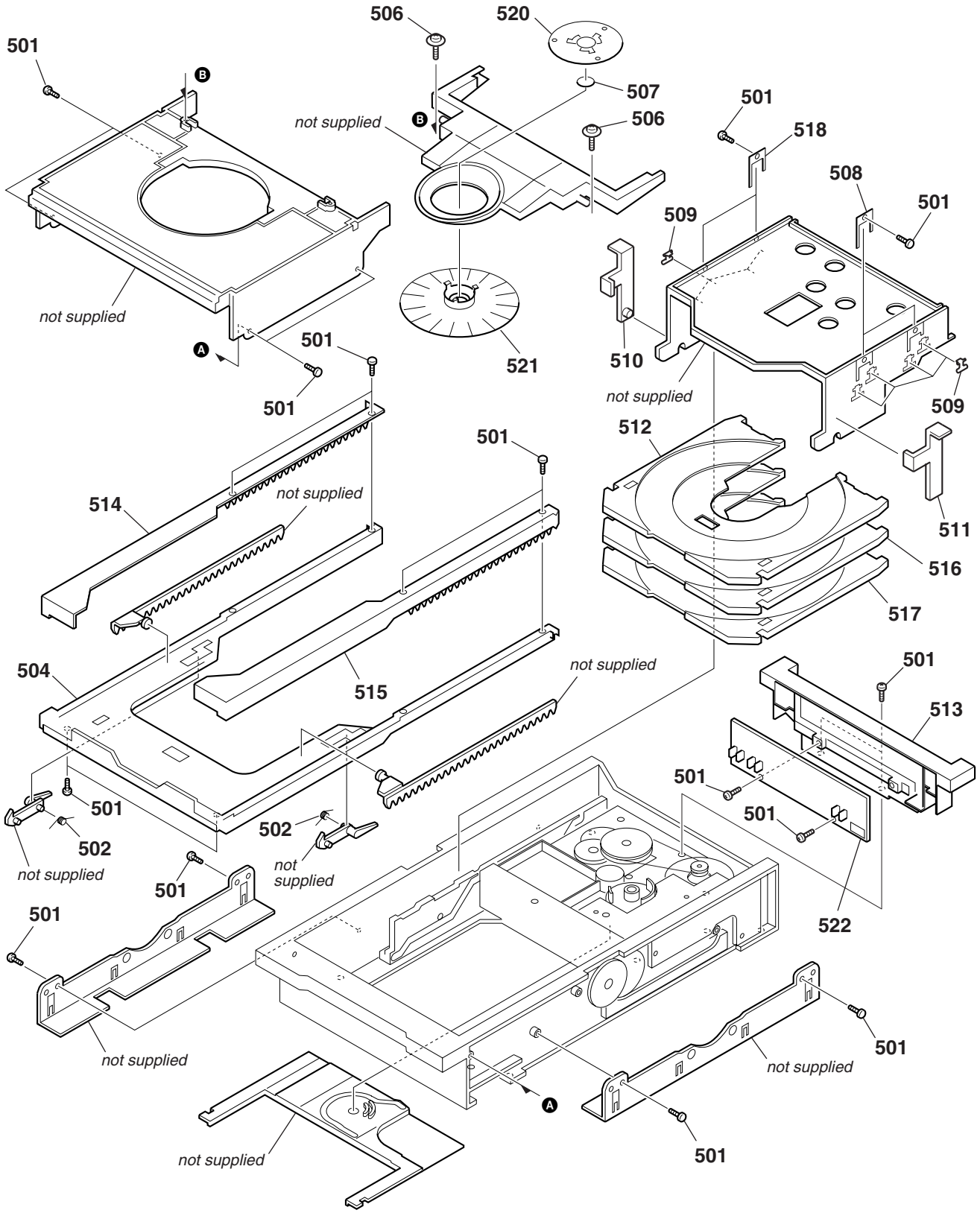
8-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
101	1-680-257-11	SUB POWER BOARD	
102	1-680-256-11	TRANS BOARD	
103	A-4475-414-A	AMP BOARD, COMPLETE (CL1:US)	
103	A-4475-422-A	AMP BOARD, COMPLETE (CL1:AEP,UK)	
103	A-4475-438-A	AMP BOARD, COMPLETE (CL1:AUS,TW,KR)	
103	A-4475-447-A	AMP BOARD, COMPLETE (CL3:AEP,UK)	
103	A-4475-459-A	AMP BOARD, COMPLETE (CL3:KR)	
103	A-4476-988-A	AMP BOARD, COMPLETE (CL1:E,MX)	
103	A-4726-254-A	AMP BOARD, COMPLETE (CL3:MX)	
104	4-965-822-01	FOOT	
⚠109	1-769-079-21	CORD, POWER (CL1:KR/CL3:KR)	
⚠109	1-575-651-11	CORD, POWER (CL1:AEP,E,TW/CL3:AEP)	
⚠109	1-783-203-11	CORD, POWER (CL1:AUS)	
⚠109	1-783-532-11	CORD, POWER (CL1:US)	
⚠109	1-790-226-11	CORD, POWER (CL1:UK/CL3:UK)	
⚠109	1-791-901-11	CORD, POWER (CL1:MX/CL3:MX)	
110	3-703-571-11	BUSHING (S) (4516), CORD (CL1:MX/CL3:MX)	
* 110	3-703-244-00	BUSHING (2104), CORD (CL1:US,AEP,UK,AUS,E,TW,KR/CL3:AEP,UK,KR)	
⚠112	1-569-008-21	ADAPTOR, CONVERSION (CL1:E,TW)	
⚠T901	1-435-808-11	TRANSFORMER, POWER (CL3:AEP,UK)	
⚠T901	1-435-809-11	TRANSFORMER, POWER (CL3:MX,KR)	
⚠T901	1-435-829-11	TRANSFORMER, POWER (CL1:AEP,UK)	
⚠T901	1-435-830-11	TRANSFORMER, POWER (CL1:US)	
⚠T901	1-435-831-11	TRANSFORMER, POWER (CL1:AUS,MX,TW,KR)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

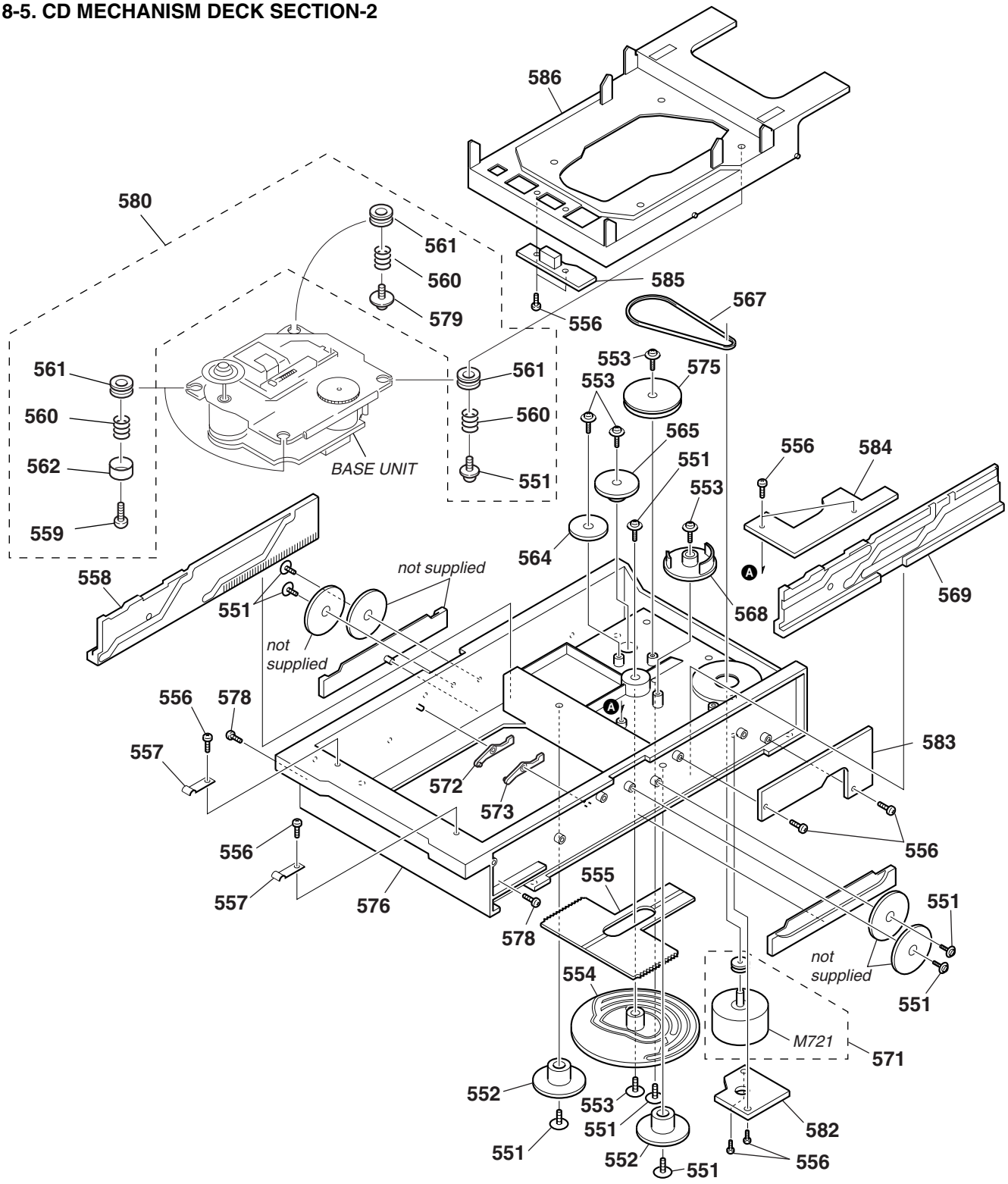
8-4. CD MECHANISM DECK SECTION-1



Ref. No.	Part No.	Description	Remarks
501	4-218-253-01	SCREW (M2.6), +BTTP	
502	4-228-995-01	SPRING (L), TORSION	
504	4-228-972-01	TRAY (MAIN)	
506	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
507	4-228-414-01	BRACKET (YOKE)	
508	4-228-980-01	SPRING (STOCKER), LEAF	
509	4-228-981-01	STOPPER (TRAY)	
510	4-228-963-01	SLIDER (STOCKER.L)	
511	4-228-964-01	SLIDER (STOCKER.R)	
512	4-228-970-01	TRAY (SUB)	

Ref. No.	Part No.	Description	Remarks
513	4-229-001-01	HOLDER (SENSOR)	
514	4-228-978-01	COVER (TRAY.R)	
515	4-228-975-01	COVER (TRAY.L)	
516	4-228-970-11	TRAY (SUB)	
517	4-228-970-21	TRAY (SUB)	
518	4-234-423-01	SPRING (STOCKER L), LEAF	
520	4-231-971-01	PULLEY (30B), CHUCKING	
521	X-4953-307-1	PULLEY (A) ASSY, CHUCKING	
522	1-678-457-11	TRAY SENSOR BOARD	

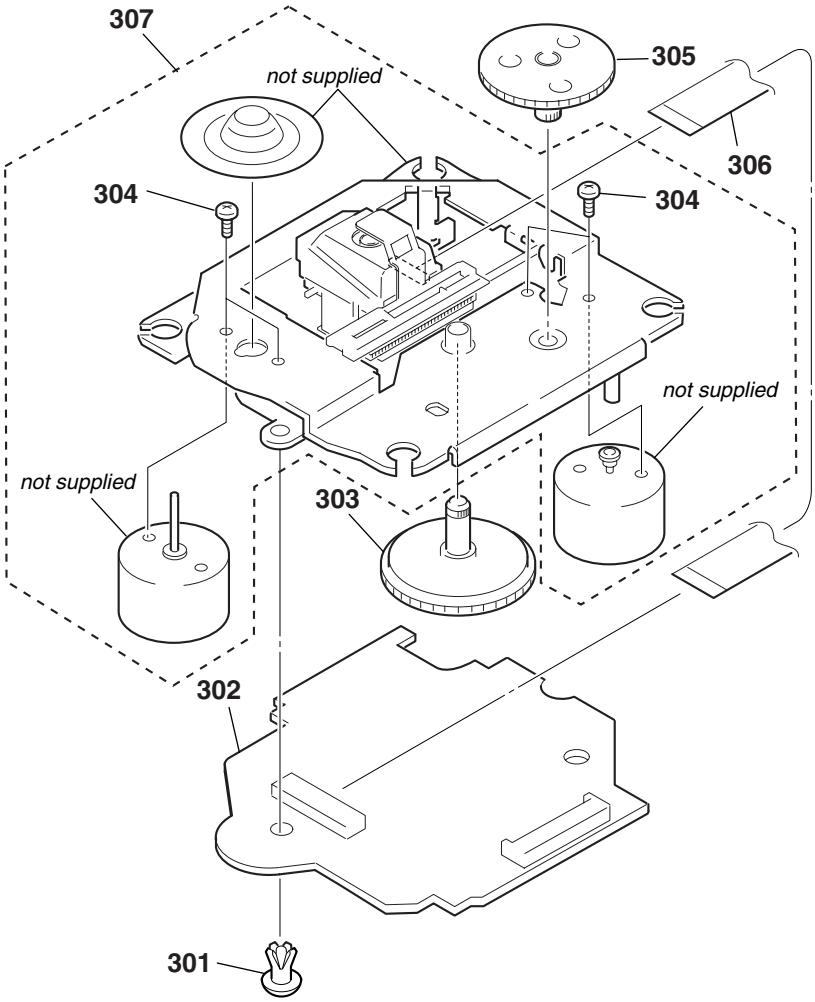
8-5. CD MECHANISM DECK SECTION-2



Ref. No.	Part No.	Description	Remarks
551	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
552	4-229-002-02	GEAR (SLIDER)	
553	4-218-254-21	SCREW (M2.6), +PTPWH	
554	4-228-971-01	CAM	
555	4-228-974-02	RACK (CENTER)	
556	4-218-253-61	SCREW (M2.6), +BTTP	
557	4-228-969-02	SPRING (TABLE), LEAF	
558	4-228-977-01	SLIDER (BU.L)	
559	4-951-620-01	SCREW (2.6X8), +BVTP	
560	4-227-045-11	SPRING (INSULATOR), COIL	
561	4-231-451-01	INSULATOR (BU-30)	
562	4-231-151-01	STOPPER (BU)	
564	4-228-985-01	GEAR (PULLEY)	
565	4-228-997-02	GEAR (CAM)	
567	4-228-968-01	BELT	
568	4-228-998-01	GEAR (DETECTION)	

Ref. No.	Part No.	Description	Remarks
569	4-228-976-01	SLIDER (BU.R)	
571	X-4952-971-1	MOTOR ASSY	
572	4-228-999-02	LEVER (MAIN.L)	
573	4-229-000-02	LEVER (MAIN.R)	
575	4-229-003-01	PULLEY	
576	4-228-988-01	CHASSIS	
578	4-218-253-71	SCREW (M2.6), +BTTP	
579	4-227-899-01	SCREW (DIA. 12), FROATING	
580	A-4412-659-A	CDM HIGH SPEED ASSY	
582	1-678-461-11	MOTOR BOARD	
583	1-678-460-11	DRIVER BOARD	
584	1-678-462-11	IN OUT SW BOARD	
585	1-678-463-11	DISK SENSOR BOARD	
586	4-231-517-03	HOLDER (BU30)	
M721	1-541-632-11	MOTOR, DC	

8-6. BASE UNIT SECTION (BU-30BD60)



Ref. No.	Part No.	Description	Remarks
301	3-531-576-11	RIVET	
302	A-4725-531-A	BD BOARD, COMPLETE	
303	4-233-832-01	GEAR (LB)	
304	7-627-853-28	SCREW, PRECISION +P 2X3 TYPE3	
305	4-233-831-01	GEAR (LA)	
306	1-757-710-11	WIRE (FLAT TYPE) (16 CORE)	
⚠307	A-4735-188-A	BU-30 (60) ASSY	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 9
ELECTRICAL PARTS LIST

AMP

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  AUS : Australian model
  MX : Mexican model
  TW : Taiwan model
  KR : Korea model

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description				Remarks
	A-4475-414-A	AMP BOARD, COMPLETE (CL1:US)				
		**********				
	A-4475-422-A	AMP BOARD, COMPLETE (CL1:AEP,UK)				
		**********				
	A-4475-438-A	AMP BOARD, COMPLETE (CL1:AUS,TW,KR)				
		**********				
	A-4475-447-A	AMP BOARD, COMPLETE (CL3:AEP,UK)				
		**********				
	A-4475-459-A	AMP BOARD, COMPLETE (CL3:KR)				
		**********				
	A-4476-988-A	AMP BOARD, COMPLETE (CL1:E,MX)				
		**********				
	A-4726-254-A	AMP BOARD, COMPLETE (CL3:MX)				
		**********				
		< CAPACITOR >				
C801	1-128-582-11	ELECT	10uF	20%	100V	(CL1:US)
C801	1-126-964-11	ELECT	10uF	20%	50V	(EXCEPT CL1:US)
C802	1-162-286-31	CERAMIC	220PF	10%	50V	
C803	1-162-282-31	CERAMIC	100PF	10%	50V	
C804	1-126-965-11	ELECT	22uF	20%	50V	
C805	1-136-161-00	FILM	0.047uF	5%	50V	
C806	1-136-161-00	FILM	0.047uF	5%	50V	
C807	1-136-153-00	FILM	0.01uF	5%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C808	1-136-153-00	FILM	0.01uF	5%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C809	1-162-306-11	CERAMIC	0.01uF	30%	16V	(CL1:AEP,UK/CL3:AEP,UK)
C810	1-162-306-11	CERAMIC	0.01uF	30%	16V	(CL1:AEP,UK/CL3:AEP,UK)
C811	1-107-713-11	ELECT	4.7uF	20%	50V	(CL1)
C811	1-107-721-11	ELECT	4.7uF	20%	100V	(CL3)
C832	1-104-665-11	ELECT	100uF	20%	10V	
C833	1-126-961-11	ELECT	2.2uF	20%	50V	
C834	1-104-665-11	ELECT	100uF	20%	10V	
C851	1-128-582-11	ELECT	10uF	20%	100V	(CL1:US)
C851	1-126-964-11	ELECT	10uF	20%	50V	(EXCEPT CL1:US)
C852	1-162-286-31	CERAMIC	220PF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-126-965-11	ELECT	22uF	20%	50V	
C855	1-136-161-00	FILM	0.047uF	5%	50V	
C856	1-136-161-00	FILM	0.047uF	5%	50V	
C857	1-136-153-00	FILM	0.01uF	5%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C858	1-136-153-00	FILM	0.01uF	5%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C859	1-162-306-11	CERAMIC	0.01uF	30%	16V	(CL1:AEP,UK/CL3:AEP,UK)
C861	1-107-713-11	ELECT	4.7uF	20%	50V	(CL1)
C861	1-107-721-11	ELECT	4.7uF	20%	100V	(CL3)
C891	1-126-959-11	ELECT	0.47uF	20%	50V	
C951	1-137-844-11	ELECT	2200uF	20%	42V	(CL1:US,AEP,UK)
C951	1-135-832-11	ELECT	2200uF	20%	50V	(CL1:E,MX,AUS,TW,KR)
C951	1-135-928-11	ELECT	2200uF	20%	63V	(CL3:AEP,UK,MX,KR/CL3:AEP,UK,KR)
C952	1-137-844-11	ELECT	2200uF	20%	42V	(CL1:US,AEP,UK)
C952	1-135-832-11	ELECT	2200uF	20%	50V	(CL1:E,MX,AUS,TW,KR)
C952	1-135-928-11	ELECT	2200uF	20%	63V	(CL3:AEP,UK,MX,KR/CL3:AEP,UK,KR)
C953	1-136-165-00	FILM	0.1uF	5%	50V	
C954	1-136-165-00	FILM	0.1uF	5%	50V	
C957	1-136-153-00	FILM	0.01uF	5%	50V	
C958	1-136-153-00	FILM	0.01uF	5%	50V	
C971	1-126-965-11	ELECT	22uF	20%	50V	(CL1)
C971	1-128-560-11	ELECT	22uF	20%	100V	(CL3)
C972	1-126-965-11	ELECT	22uF	20%	50V	(CL1)
C972	1-128-560-11	ELECT	22uF	20%	100V	(CL3)
C973	1-104-665-11	ELECT	100uF	20%	10V	
C974	1-126-967-11	ELECT	47uF	20%	50V	
C975	1-162-306-11	CERAMIC	0.01uF	30%	16V	(CL1:AEP,UK/CL3:AEP,UK)
C991	1-126-963-11	ELECT	4.7uF	20%	50V	(CL3)
		< CONNECTOR >				
CN801	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P				
CN952	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P				
		< DIODE >				
D801	8-719-911-19	DIODE 1SS133T-72				
D831	8-719-911-19	DIODE 1SS133T-72				
D851	8-719-911-19	DIODE 1SS133T-72				
D881	8-719-911-19	DIODE 1SS133T-72				
D891	8-719-911-19	DIODE 1SS133T-72				

AMP

Ref. No.	Part No.	Description	Remarks
D953	8-719-024-99	DIODE 11ES2-NTA2B	
D954	8-719-024-99	DIODE 11ES2-NTA2B	
D955	8-719-024-99	DIODE 11ES2-NTA2B	
D956	8-719-024-99	DIODE 11ES2-NTA2B	
D957	8-719-024-99	DIODE 11ES2-NTA2B	
D958	8-719-024-99	DIODE 11ES2-NTA2B	
D959	8-719-024-99	DIODE 11ES2-NTA2B	
D960	8-719-024-99	DIODE 11ES2-NTA2B	
D961	8-719-911-19	DIODE 1SS133T-72	
D962	8-719-911-19	DIODE 1SS133T-72	
D971	8-719-911-19	DIODE 1SS133T-72	
D991	8-719-911-19	DIODE 1SS133T-72 (CL3)	
		< IC >	
IC801	8-749-016-93	IC STK402-070S (CL1)	
IC801	8-749-016-96	IC STK402-120S (CL3)	
		< COIL >	
L801	1-420-872-00	COIL, AIR-CORE (CL1:AEP,UK/CL3:AEP,UK)	
L851	1-420-872-00	COIL, AIR-CORE (CL1:AEP,UK/CL3:AEP,UK)	
		< TRANSISTOR >	
Q801	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q801	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q831	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q832	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q833	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q834	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q835	8-729-119-76	TRANSISTOR 2SA1175TP-HFE (CL1)	
Q835	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA (CL3)	
Q836	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q836	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q837	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q837	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q841	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q842	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
Q851	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q851	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q881	8-729-119-76	TRANSISTOR 2SA1175TP-HFE (CL1)	
Q881	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA (CL3)	
Q882	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q882	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q971	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q971	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
Q972	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
Q973	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (CL1)	
Q973	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA (CL3)	
		< RESISTOR >	
R801	1-249-417-11	CARBON 1K 5% 1/4W F	
R802	1-249-437-11	CARBON 47K 5% 1/4W	
R803	1-249-419-11	CARBON 1.5K 5% 1/4W F	(CL1)
R803	1-249-416-11	CARBON 820 5% 1/4W F	(CL3)
R804	1-249-437-11	CARBON 47K 5% 1/4W	
⚠R805	1-233-352-11	ENCAPSULATED COMPONENT (CL1)	
⚠R805	1-234-499-21	ENCAPSULATED COMPONENT (CL3)	
R806	1-260-076-11	CARBON 10 5% 1/2W	
R807	1-260-076-11	CARBON 10 5% 1/2W	(CL1:AEP,UK/CL3:AEP,UK)
R808	1-260-076-11	CARBON 10 5% 1/2W	(CL1:AEP,UK/CL3:AEP,UK)
R810	1-249-417-11	CARBON 1K 5% 1/4W F	
R811	1-249-431-11	CARBON 15K 5% 1/4W	
R812	1-249-441-11	CARBON 100K 5% 1/4W	
R813	1-249-437-11	CARBON 47K 5% 1/4W	(CL3)
R814	1-249-438-11	CARBON 56K 5% 1/4W	
R815	1-249-433-11	CARBON 22K 5% 1/4W	
R816	1-215-889-00	METAL OXIDE 330 5% 2W	(CL1)
R816	1-216-455-11	METAL OXIDE 560 5% 2W	(CL3)
R833	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R834	1-249-435-11	CARBON 33K 5% 1/4W	
R835	1-249-433-11	CARBON 22K 5% 1/4W	
R836	1-249-429-11	CARBON 10K 5% 1/4W	
R837	1-249-429-11	CARBON 10K 5% 1/4W	
R839	1-249-441-11	CARBON 100K 5% 1/4W	
R841	1-249-440-11	CARBON 82K 5% 1/4W	(CL1:US,AEP,UK,AUS,TW,KR)
R841	1-249-441-11	CARBON 100K 5% 1/4W	(CL1:E,MX/CL3)
R842	1-249-441-11	CARBON 100K 5% 1/4W	
R843	1-249-441-11	CARBON 100K 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W F	
R852	1-249-437-11	CARBON 47K 5% 1/4W	
R853	1-249-419-11	CARBON 1.5K 5% 1/4W F	(CL1)
R853	1-249-416-11	CARBON 820 5% 1/4W F	(CL3)
R854	1-249-437-11	CARBON 47K 5% 1/4W	
⚠R855	1-233-352-11	ENCAPSULATED COMPONENT (CL1)	
⚠R855	1-234-499-21	ENCAPSULATED COMPONENT (CL3)	
R856	1-260-076-11	CARBON 10 5% 1/2W	
R857	1-260-076-11	CARBON 10 5% 1/2W	(CL1:AEP,UK/CL3:AEP,UK)
R858	1-260-076-11	CARBON 10 5% 1/2W	(CL1:AEP,UK/CL3:AEP,UK)
R860	1-249-417-11	CARBON 1K 5% 1/4W F	
R861	1-249-431-11	CARBON 15K 5% 1/4W	
R862	1-249-441-11	CARBON 100K 5% 1/4W	
R863	1-249-437-11	CARBON 47K 5% 1/4W	(CL3)
R864	1-249-437-11	CARBON 47K 5% 1/4W	
R865	1-249-433-11	CARBON 22K 5% 1/4W	
R866	1-215-889-00	METAL OXIDE 330 5% 2W	(CL1)
R866	1-216-455-11	METAL OXIDE 560 5% 2W	(CL3)
⚠R881	1-215-890-11	METAL OXIDE 470 5% 2W	(CL1)
⚠R881	1-215-892-11	METAL OXIDE 1K 5% 2W	(CL3)
R882	1-249-429-11	CARBON 10K 5% 1/4W	
R883	1-249-429-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R884	1-249-429-11	CARBON	10K	5%	1/4W
R885	1-249-441-11	CARBON	100K	5%	1/4W
R891	1-249-429-11	CARBON	10K	5%	1/4W
R892	1-249-441-11	CARBON	100K	5%	1/4W
R893	1-247-903-00	CARBON	1M	5%	1/4W
R898	1-249-441-11	CARBON	100K	5%	1/4W (CL3)
R899	1-249-429-11	CARBON	10K	5%	1/4W (CL3)
R951	1-249-425-11	CARBON	4.7K	5%	1/4W F
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
R961	1-249-437-11	CARBON	47K	5%	1/4W (CL1:E,MX/CL3:MX)
R962	1-249-437-11	CARBON	47K	5%	1/4W (CL1:E,MX/CL3:MX)
⚠R971	1-212-881-11	FUSIBLE	100	5%	1/4W
⚠R972	1-212-881-11	FUSIBLE	100	5%	1/4W
R973	1-249-435-11	CARBON	33K	5%	1/4W
R974	1-249-433-11	CARBON	22K	5%	1/4W
R975	1-249-437-11	CARBON	47K	5%	1/4W
R976	1-249-441-11	CARBON	100K	5%	1/4W
R977	1-249-421-11	CARBON	2.2K	5%	1/4W F
R978	1-249-433-11	CARBON	22K	5%	1/4W
R979	1-249-421-11	CARBON	2.2K	5%	1/4W F
R980	1-249-429-11	CARBON	10K	5%	1/4W
R981	1-249-429-11	CARBON	10K	5%	1/4W
⚠R982	1-202-972-61	FUSIBLE	1	5%	1/4W
		< RELAY >			
RY801	1-515-920-11	RELAY (24V)			
		< TERMINAL >			
TM801	1-694-677-12	TERMINAL BOARD (4P)			
**********					
	1-679-981-11	BACK LIGHT BOARD			
		**********			
		< CAPACITOR >			
C709	1-104-665-11	ELECT	100uF	20%	10V
C777	1-162-294-31	CERAMIC	0.001uF	10%	50V (CL1:US/CL3)
C778	1-162-294-31	CERAMIC	0.001uF	10%	50V (CL1:US/CL3)
C779	1-162-294-31	CERAMIC	0.001uF	10%	50V (CL1:US/CL3)
		< CONNECTOR >			
CN771	1-506-481-11	PIN, CONNECTOR 2P			
		< DIODE >			
D771	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D772	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D773	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D774	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D775	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D776	8-719-075-50	DIODE SELS6B14C-TP6(BACK LIGHT)(CL1)			
D777	8-719-082-32	DIODE SELU2E10CTP6(BACK LIGHT) (CL1:US/CL3)			
D778	8-719-082-32	DIODE SELU2E10CTP6(BACK LIGHT) (CL1:US/CL3)			
D779	8-719-082-32	DIODE SELU2E10CTP6(BACK LIGHT) (CL1:US/CL3)			

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R771	1-249-409-11	CARBON	220	5%	1/4W F (CL1)
R771	1-249-406-11	CARBON	120	5%	1/4W F (CL3)
R772	1-249-409-11	CARBON	220	5%	1/4W F (CL1)
R772	1-249-406-11	CARBON	120	5%	1/4W F (CL3)
R773	1-249-409-11	CARBON	220	5%	1/4W F (CL1)
R773	1-249-406-11	CARBON	120	5%	1/4W F (CL3)
**********					
	A-4725-531-A	BD (CD) BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C104	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C114	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C116	1-104-665-11	ELECT	100uF	20%	10V
C117	1-104-665-11	ELECT	100uF	20%	10V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C122	1-124-584-00	ELECT	100uF	20%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C125	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C126	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C127	1-124-584-00	ELECT	100uF	20%	10V
C129	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C130	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C131	1-104-665-11	ELECT	100uF	20%	10V
C133	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C143	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C145	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C153	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C159	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C162	1-104-665-11	ELECT	100uF	20%	10V
C165	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C167	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C168	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C171	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C172	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C181	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C182	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C183	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C184	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C185	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C190	1-115-156-11	CERAMIC CHIP	1uF		10V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

BD (CD) DISK SENSOR DRIVER

Ref. No.	Part No.	Description			Remarks
C191	1-124-584-00	ELECT	100uF	20%	10V
C192	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C193	1-104-665-11	ELECT	100uF	20%	10V
C194	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C195	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C196	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C198	1-124-584-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN101	1-568-864-11	CONNECTOR, FFC 21P			
CN102	1-793-907-11	CONNECTOR, FFC/FPC 16P			
		< DIODE >			
D101	8-719-422-12	DIODE UDZ-TE-17-3.9B			
		< FERRITE BEAD >			
FB101	1-500-445-11	FERRITE	0UH		
FB102	1-500-445-11	FERRITE	0UH		
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC102	8-759-827-41	IC BA5974FM-E2			
IC103	8-752-089-74	IC CXA2581N-T4			
		< JUMPER RESISTOR >			
JR101	1-216-295-11	SHORT	0		
JR102	1-216-295-11	SHORT	0		
JR103	1-216-295-11	SHORT	0		
JR104	1-216-295-11	SHORT	0		
JR105	1-216-295-11	SHORT	0		
JR106	1-216-295-11	SHORT	0		
JR122	1-216-296-11	SHORT	0		
JR123	1-216-296-11	SHORT	0		
JR124	1-216-296-11	SHORT	0		
JR125	1-216-296-11	SHORT	0		
		< COIL >			
L101	1-469-553-21	INDUCTOR	4.7uH		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		
Q102	8-729-920-85	TRANSISTOR	2SD1664-T100-QR		
		< RESISTOR >			
R101	1-216-049-11	RES-CHIP	1K	5%	1/10W
R102	1-216-097-11	RES-CHIP	100K	5%	1/10W
R103	1-216-077-91	RES-CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-049-11	RES-CHIP	1K	5%	1/10W
R106	1-216-049-11	RES-CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-11	RES-CHIP	1M	5%	1/10W
R111	1-216-099-00	METAL CHIP	120K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R114	1-218-745-11	RES-CHIP	160K	5%	1/16W
R116	1-216-001-00	METAL CHIP	10	5%	1/10W
R117	1-216-049-11	RES-CHIP	1K	5%	1/10W
R118	1-216-025-11	RES-CHIP	100	5%	1/10W
R119	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R120	1-216-077-91	RES-CHIP	15K	5%	1/10W
R122	1-216-097-11	RES-CHIP	100K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-11	RES-CHIP	100K	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R143	1-216-085-00	METAL CHIP	33K	5%	1/10W
R144	1-216-085-00	METAL CHIP	33K	5%	1/10W
R147	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-083-00	METAL CHIP	27K	5%	1/10W
R159	1-216-083-00	METAL CHIP	27K	5%	1/10W
R162	1-216-097-11	RES-CHIP	100K	5%	1/10W
R171	1-216-081-00	METAL CHIP	22K	5%	1/10W
R172	1-216-081-00	METAL CHIP	22K	5%	1/10W
R173	1-216-081-00	METAL CHIP	22K	5%	1/10W
R181	1-216-081-00	METAL CHIP	22K	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-081-00	METAL CHIP	22K	5%	1/10W
R190	1-216-033-00	METAL CHIP	220	5%	1/10W
R191	1-216-085-00	METAL CHIP	33K	5%	1/10W
R192	1-216-085-00	METAL CHIP	33K	5%	1/10W
R193	1-216-099-00	METAL CHIP	120K	5%	1/10W
R194	1-216-097-11	RES-CHIP	100K	5%	1/10W
R195	1-216-113-00	METAL CHIP	470K	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R198	1-216-295-11	SHORT	0		
		< CHIP NETWORK >			
RN101	1-233-576-11	RES, CHIP NETWORK 100			
		< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL			
**********					
	1-678-463-11	DISK SENSOR BOARD			
		**********			
		< IC >			
IC751	8-749-924-30	PHOTO REFLECTOR GP2S28			
		< RESISTOR >			
R751	1-249-407-11	CARBON	150	5%	1/4W F
**********					
	1-678-460-11	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C701	1-124-261-00	ELECT	10uF	20%	50V
C705	1-124-261-00	ELECT	10uF	20%	50V
C706	1-164-159-11	CERAMIC	0.1uF		50V
C707	1-164-159-11	CERAMIC	0.1uF		50V

DRIVER **IN OUT SW** **MAIN**

Ref. No.	Part No.	Description				Remarks
		< CONNECTOR >				
CN701	1-785-324-11	PIN, CONNECTOR (STRAIGHT) 12P				
CN702	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE)2P				
CN703	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE)5P				
CN704	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE)3P				
CN705	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE)3P				
		< IC >				
IC701	8-759-598-69	IC BA6956AN				
		< TRANSISTOR >				
Q701	8-729-029-66	TRANSISTOR	RT1N141S-TP			
		< RESISTOR >				
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-401-11	CARBON	47	5%	1/4W	F
R705	1-249-435-11	CARBON	33K	5%	1/4W	
R706	1-249-417-11	CARBON	1K	5%	1/4W	F
R707	1-249-429-11	CARBON	10K	5%	1/4W	
**********						
	1-678-462-11	IN OUT SW BOARD				
		**********				
		< SWITCH >				
S741	1-771-821-11	SWITCH, PUSH (1 KEY) (IN)				
S742	1-771-821-11	SWITCH, PUSH (1 KEY) (OUT)				
**********						
	A-4475-419-A	MAIN BOARD, COMPLETE (CL1:US)				
		**********				
	A-4475-433-A	MAIN BOARD, COMPLETE (CL1:AEP,UK)				
		**********				
	A-4475-444-A	MAIN BOARD, COMPLETE (CL1:AUS,TW,KR)				
		**********				
	A-4475-450-A	MAIN BOARD, COMPLETE (CL3:AEP,UK)				
		**********				
	A-4475-462-A	MAIN BOARD, COMPLETE (CL3:KR)				
		**********				
	A-4476-083-A	MAIN BOARD, COMPLETE (CL1:E,MX)				
		**********				
	A-4726-257-A	MAIN BOARD, COMPLETE (CL3:MX)				
		**********				
	7-685-646-79	SCREW +BVTP	3X8 TYPE2 N-S			
		< CAPACITOR >				
C103	1-126-767-11	ELECT	1000uF	20%	16V	
C104	1-126-956-91	ELECT	0.1uF	20%	50V	
C105	1-126-933-11	ELECT	100uF	20%	16V	
C106	1-126-935-11	ELECT	470uF	20%	16V	
C107	1-126-956-91	ELECT	0.1uF	20%	50V	
C108	1-126-964-11	ELECT	10uF	20%	50V	
C109	1-126-953-11	ELECT	2200uF	20%	35V	
C110	1-126-937-11	ELECT	4700uF	20%	16V	
C114	1-126-964-11	ELECT	10uF	20%	50V	
C116	1-126-916-11	ELECT	1000uF	20%	6.3V	
C117	1-126-916-11	ELECT	1000uF	20%	6.3V	
C119	1-126-916-11	ELECT	1000uF	20%	6.3V	
C120	1-126-964-11	ELECT	10uF	20%	50V	
C121	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C122	1-126-935-11	ELECT	470uF	20%	16V	

Ref. No.	Part No.	Description				Remarks
C141	1-126-964-11	ELECT	10uF	20%	50V	
C142	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C143	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C183	1-109-889-11	ELECT	1uF	20%	50V	
C191	1-126-964-11	ELECT	10uF	20%	50V	
C192	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	(CL1:AEP,UK/CL3:AEP,UK)
C200	1-126-964-11	ELECT	10uF	20%	50V	
C201	1-104-665-11	ELECT	100uF	20%	10V	
C202	1-130-477-00	MYLAR	0.0033uF	5%	50V	
C203	1-126-964-11	ELECT	10uF	20%	50V	
C204	1-136-165-00	FILM	0.1uF	5%	50V	
C205	1-136-169-00	FILM	0.22uF	5%	50V	
C206	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C207	1-126-964-11	ELECT	10uF	20%	50V	
C208	1-136-165-00	FILM	0.1uF	5%	50V	
C209	1-136-165-00	FILM	0.1uF	5%	50V	
C210	1-126-963-11	ELECT	4.7uF	20%	50V	
C211	1-126-964-11	ELECT	10uF	20%	50V	
C212	1-126-964-11	ELECT	10uF	20%	50V	
C214	1-126-964-11	ELECT	10uF	20%	50V	
C218	1-126-964-11	ELECT	10uF	20%	50V	
C219	1-126-964-11	ELECT	10uF	20%	50V	
C253	1-126-964-11	ELECT	10uF	20%	50V	
C254	1-136-165-00	FILM	0.1uF	5%	50V	
C255	1-136-169-00	FILM	0.22uF	5%	50V	
C256	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C257	1-126-964-11	ELECT	10uF	20%	50V	
C258	1-136-165-00	FILM	0.1uF	5%	50V	
C259	1-136-165-00	FILM	0.1uF	5%	50V	
C260	1-126-963-11	ELECT	4.7uF	20%	50V	
C261	1-126-964-11	ELECT	10uF	20%	50V	
C262	1-126-964-11	ELECT	10uF	20%	50V	
C264	1-126-964-11	ELECT	10uF	20%	50V	
C301	1-126-960-11	ELECT	1uF	20%	50V	
C303	1-136-165-00	FILM	0.1uF	5%	50V	
C305	1-126-964-11	ELECT	10uF	20%	50V	
C306	1-126-960-11	ELECT	1uF	20%	50V	
C307	1-126-959-11	ELECT	0.47uF	20%	50V	
C308	1-126-964-11	ELECT	10uF	20%	50V	
C309	1-137-194-81	FILM	0.47uF	5%	50V	
C310	1-162-962-11	CERAMIC CHIP	470PF	10%	50V	
C311	1-126-964-11	ELECT	10uF	20%	50V	
C312	1-126-959-11	ELECT	0.47uF	20%	50V	
C313	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C314	1-126-964-11	ELECT	10uF	20%	50V	
C315	1-126-963-11	ELECT	4.7uF	20%	50V	
C316	1-126-933-11	ELECT	100uF	20%	16V	
C317	1-104-665-11	ELECT	100uF	20%	10V	
C319	1-126-959-11	ELECT	0.47uF	20%	50V	
C321	1-126-964-11	ELECT	10uF	20%	50V	
C322	1-126-964-11	ELECT	10uF	20%	50V	
C351	1-126-960-11	ELECT	1uF	20%	50V	
C353	1-136-165-00	FILM	0.1uF	5%	50V	
C355	1-126-964-11	ELECT	10uF	20%	50V	
C356	1-126-960-11	ELECT	1uF	20%	50V	

MAIN

Ref. No.	Part No.	Description			Remarks
C357	1-126-959-11	ELECT	0.47uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-137-194-11	FILM	0.47uF	5%	50V
C360	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C362	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C369	1-126-959-11	ELECT	0.47uF	20%	50V
C410	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C411	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C412	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C413	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C414	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C415	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C416	1-126-916-11	ELECT	1000uF	20%	6.3V
C417	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C462	1-104-665-11	ELECT	100uF	20%	10V
C464	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C497	1-126-964-11	ELECT	10uF	20%	50V
C498	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-136-165-00	FILM	0.1uF	5%	50V
C502	1-136-165-00	FILM	0.1uF	5%	50V
C503	1-126-964-11	ELECT	10uF	20%	50V
C506	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C508	1-126-964-11	ELECT	10uF	20%	50V
C510	1-126-964-11	ELECT	10uF	20%	50V
C511	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C521	1-126-382-11	ELECT	100uF	20%	10V
C523	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C524	1-115-872-11	ELECT	2.2uF	20%	50V
C533	1-126-382-11	ELECT	100uF	20%	10V
C545	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C546	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C547	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C548	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C549	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C550	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C551	1-104-665-11	ELECT	100uF	20%	10V
C556	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C574	1-115-872-11	ELECT	2.2uF	20%	50V
C601	1-126-963-11	ELECT	4.7uF	20%	50V
C602	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C603	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C604	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C605	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C606	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C607	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C608	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C715	1-119-941-91	ELECT	470uF	20%	6.3V
C717	1-126-382-11	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN101	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P			
CN201	1-568-864-11	CONNECTOR, FFC 21P			
CN251	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P			
* CN301	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P			
CN304	1-568-828-11	CONNECTOR, FFC 9P			

Ref. No.	Part No.	Description	Remarks
* CN305	1-568-936-11	PIN, CONNECTOR 9P	
CN501	1-506-468-11	PIN, CONNECTOR 3P	
CN502	1-568-830-11	CONNECTOR, FFC 11P	
		(CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)	
CN502	1-784-776-11	CONNECTOR, FFC 15P	
		(CL1:AEP,UK/CL3:AEP,UK)	
CN503	1-793-766-11	CONNECTOR, BOARD TO BOARD 30P	
		< DIODE >	
D103	8-719-988-61	DIODE 1SS355TE-17	
D106	8-719-083-89	DIODE 11ES2N-TB5	
D107	8-719-988-61	DIODE 1SS355TE-17	
D108	8-719-083-89	DIODE 11ES2N-TB5	
D182	8-719-988-61	DIODE 1SS355TE-17	
D202	8-719-069-54	DIODE UDZSTE-175.1B	
D203	8-719-988-61	DIODE 1SS355TE-17	
D361	8-719-988-61	DIODE 1SS355TE-17	
D501	8-719-988-61	DIODE 1SS355TE-17	
D502	8-719-988-61	DIODE 1SS355TE-17	
D504	8-719-988-61	DIODE 1SS355TE-17	
D505	8-719-988-61	DIODE 1SS355TE-17	
D506	8-719-988-61	DIODE 1SS355TE-17	
D507	8-719-988-61	DIODE 1SS355TE-17	
D508	8-719-988-61	DIODE 1SS355TE-17	
D509	8-719-988-61	DIODE 1SS355TE-17	
D514	8-719-988-61	DIODE 1SS355TE-17	
		< EARTH >	
* EP901	1-537-738-21	TERMINAL, EARTH	
		< FERRITE BEAD >	
FB416	1-414-772-11	FERRITE 0UH	
FB462	1-414-772-11	FERRITE 0UH	
FB499	1-414-772-11	FERRITE 0UH	
FB510	1-500-445-21	FERRITE 0UH	
FB511	1-414-772-11	FERRITE 0UH	
FB512	1-500-445-21	FERRITE 0UH	
FB513	1-414-772-11	FERRITE 0UH	
		< IC >	
IC101	8-759-604-32	IC M5F7810L	
IC102	8-759-701-59	IC M5F7809L	
IC103	8-759-604-86	IC M5F7807L	
IC105	8-759-158-62	IC TA78057S	
IC201	8-759-494-40	IC M62428AFP600C	
IC301	6-700-232-01	IC HA12227F-CL	
IC401	8-759-697-75	IC M30622MGA-A34FP	
IC501	8-759-635-63	IC M51943BSL-TP	
IC504	8-759-491-46	IC TC74VHCT04AFT(EL)	
IC551	8-749-923-04	IC TOTX178A	
		< JACK >	
J101	1-815-045-11	JACK, PIN 2P (VIDEO(AUDIO)IN)	
		< JUMPER RESISTOR >	
JR100	1-216-864-11	SHORT 0	
JR101	1-216-864-11	SHORT 0	
JR102	1-216-864-11	SHORT 0	
JR215	1-216-864-11	SHORT 0	
JR265	1-216-864-11	SHORT 0	

Ref. No.	Part No.	Description			Remarks
JR515	1-216-864-11	SHORT	0		
JR501	1-216-864-11	SHORT	0 (CL1:AEP,UK/CL3:AEP,UK)		
JR502	1-216-864-11	SHORT	0 (CL1:AEP,UK/CL3:AEP,UK)		
JR503	1-216-864-11	SHORT	0 (CL1:AEP,UK/CL3:AEP,UK)		
JR561	1-216-864-11	SHORT	0		
JR562	1-216-864-11	SHORT	0		
JR563	1-216-864-11	SHORT	0		
JR922	1-216-864-11	SHORT	0 (CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)		
JR923	1-216-864-11	SHORT	0 (CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)		
		< COIL >			
L201	1-216-864-91	SHORT	0		
L311	1-410-393-11	INDUCTOR CHIP	100uH		
L551	1-410-393-11	INDUCTOR CHIP	100uH		
L552	1-410-381-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q104	8-729-107-43	TRANSISTOR	2SC3624-T1L1718		
Q106	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q109	8-729-049-79	TRANSISTOR	RT1P137S-TP		
Q181	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q182	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q183	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q201	8-729-107-43	TRANSISTOR	2SC3624-T1L1718		
Q203	8-729-107-43	TRANSISTOR	2SC3624-T1L1718		
Q251	8-729-107-43	TRANSISTOR	2SC3624-T1L1718		
Q253	8-729-107-43	TRANSISTOR	2SC3624-T1L1718		
Q271	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q391	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q392	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q396	8-729-116-57	TRANSISTOR	2SB1068TP-K		
Q397	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q501	8-729-120-28	TRANSISTOR	2SC3052EF-T1-LEF		
		< RESISTOR >			
R101	1-216-817-11	METAL CHIP	470	5%	1/16W
R120	1-216-821-11	METAL CHIP	1K	5%	1/16W
R121	1-216-864-11	SHORT	0		
R123	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R142	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R181	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R182	1-216-845-11	METAL CHIP	100K	5%	1/16W
R183	1-216-833-11	METAL CHIP	10K	5%	1/16W
R184	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R191	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R192	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R201	1-216-839-11	METAL CHIP	33K	5%	1/16W
R202	1-216-857-11	METAL CHIP	1M	5%	1/16W
R203	1-216-849-11	METAL CHIP	220K	5%	1/16W (CL1)
R203	1-218-745-11	RES-CHIP	160K	5%	1/16W (CL3)
R204	1-216-857-11	METAL CHIP	1M	5%	1/16W
R205	1-216-839-11	METAL CHIP	33K	5%	1/16W
R206	1-216-828-11	METAL CHIP	3.9K	5%	1/16W (CL1)
R206	1-220-158-11	RES-CHIP	3.6K	5%	1/16W (CL3)
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W
R208	1-216-864-11	SHORT	0		
R209	1-216-864-11	SHORT	0		
R210	1-216-864-11	SHORT	0		
R213	1-216-821-11	METAL CHIP	1K	5%	1/16W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R215	1-216-821-11	METAL CHIP	1K	5%	1/16W
R216	1-216-845-11	METAL CHIP	100K	5%	1/16W
R253	1-216-849-11	METAL CHIP	220K	5%	1/16W (CL1)
R253	1-218-745-11	RES-CHIP	160K	5%	1/16W (CL3)
R254	1-216-857-11	METAL CHIP	1M	5%	1/16W
R255	1-216-839-11	METAL CHIP	33K	5%	1/16W
R256	1-216-828-11	METAL CHIP	3.9K	5%	1/16W (CL1)
R256	1-220-158-11	RES-CHIP	3.6K	5%	1/16W (CL3)
R257	1-216-845-11	METAL CHIP	100K	5%	1/16W
R264	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R265	1-216-821-11	METAL CHIP	1K	5%	1/16W
R266	1-216-845-11	METAL CHIP	100K	5%	1/16W
R301	1-216-839-11	METAL CHIP	33K	5%	1/16W
R302	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R303	1-216-864-11	SHORT	0		
R304	1-216-809-11	METAL CHIP	100	5%	1/16W
R305	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R306	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R307	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R309	1-216-837-11	METAL CHIP	22K	5%	1/16W
R311	1-216-857-11	METAL CHIP	1M	5%	1/16W
R312	1-218-745-11	RES-CHIP	160K	5%	1/16W
R314	1-216-821-11	METAL CHIP	1K	5%	1/16W
R315	1-216-833-11	METAL CHIP	10K	5%	1/16W
R316	1-216-838-11	METAL CHIP	27K	5%	1/16W
R317	1-216-833-11	METAL CHIP	10K	5%	1/16W
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W
R319	1-216-852-11	METAL CHIP	390K	5%	1/16W
R321	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R351	1-216-839-11	METAL CHIP	33K	5%	1/16W
R352	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R353	1-216-864-91	SHORT	0		
R354	1-216-809-11	METAL CHIP	100	5%	1/16W
R355	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R356	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R357	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R358	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R360	1-216-819-11	METAL CHIP	680	5%	1/16W
R361	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R362	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R366	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R367	1-216-841-11	METAL CHIP	47K	5%	1/16W
R368	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R369	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R370	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R371	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R372	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R373	1-216-829-11	METAL CHIP	4.7K	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remarks
R375	1-218-296-11	RES-CHIP	75K	5%	1/16W
R376	1-216-841-11	METAL CHIP	47K	5%	1/16W
R377	1-216-837-11	METAL CHIP	22K	5%	1/16W
R378	1-216-833-11	METAL CHIP	10K	5%	1/16W
R400	1-216-809-11	METAL CHIP	100	5%	1/16W
R401	1-216-809-11	METAL CHIP	100	5%	1/16W
R402	1-216-809-11	METAL CHIP	100	5%	1/16W
R403	1-216-809-11	METAL CHIP	100	5%	1/16W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-216-809-11	METAL CHIP	100	5%	1/16W
R406	1-216-809-11	METAL CHIP	100	5%	1/16W
R407	1-216-809-11	METAL CHIP	100	5%	1/16W
R409	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-851-11	METAL CHIP	330K	5%	1/16W
R413	1-216-864-91	SHORT	0		
R414	1-216-809-11	METAL CHIP	100	5%	1/16W
R415	1-216-833-11	METAL CHIP	10K	5%	1/16W
R416	1-216-809-11	METAL CHIP	100	5%	1/16W
R417	1-216-833-11	METAL CHIP	10K	5%	1/16W
R418	1-216-809-11	METAL CHIP	100	5%	1/16W
R419	1-216-809-11	METAL CHIP	100	5%	1/16W
R420	1-216-809-11	METAL CHIP	100	5%	1/16W
R421	1-216-809-11	METAL CHIP	100	5%	1/16W
R422	1-216-809-11	METAL CHIP	100	5%	1/16W
R423	1-216-809-11	METAL CHIP	100	5%	1/16W
R424	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R425	1-216-809-11	METAL CHIP	100	5%	1/16W
R426	1-216-849-11	METAL CHIP	220K	5%	1/16W
R427	1-216-809-11	METAL CHIP	100	5%	1/16W
R428	1-216-845-11	METAL CHIP	100K	5%	1/16W
R429	1-216-809-11	METAL CHIP	100	5%	1/16W
R430	1-216-809-11	METAL CHIP	100	5%	1/16W
R431	1-216-833-11	METAL CHIP	10K	5%	1/16W
R432	1-216-833-11	METAL CHIP	10K	5%	1/16W
R433	1-216-833-11	METAL CHIP	10K	5%	1/16W
R435	1-216-809-11	METAL CHIP	100	5%	1/16W
R436	1-216-809-11	METAL CHIP	100	5%	1/16W
R437	1-216-809-11	METAL CHIP	100	5%	1/16W
R438	1-216-821-11	METAL CHIP	1K	5%	1/16W
R442	1-216-809-11	METAL CHIP	100	5%	1/16W
R443	1-216-809-11	METAL CHIP	100	5%	1/16W
R444	1-216-809-11	METAL CHIP	100	5%	1/16W
R446	1-216-809-11	METAL CHIP	100	5%	1/16W
R447	1-216-809-11	METAL CHIP	100	5%	1/16W
R448	1-216-809-11	METAL CHIP	100	5%	1/16W
R449	1-216-809-11	METAL CHIP	100	5%	1/16W
R450	1-216-809-11	METAL CHIP	100	5%	1/16W
R451	1-216-809-11	METAL CHIP	100	5%	1/16W
R452	1-216-809-11	METAL CHIP	100	5%	1/16W
R453	1-216-833-11	METAL CHIP	10K	5%	1/16W
R456	1-216-809-11	METAL CHIP	100	5%	1/16W
R457	1-216-809-11	METAL CHIP	100	5%	1/16W
R458	1-216-809-11	METAL CHIP	100	5%	1/16W
R459	1-216-809-11	METAL CHIP	100	5%	1/16W
R460	1-216-809-11	METAL CHIP	100	5%	1/16W
R461	1-216-809-11	METAL CHIP	100	5%	1/16W
R462	1-216-809-11	METAL CHIP	100	5%	1/16W
R463	1-216-814-11	METAL CHIP	270	5%	1/16W
R464	1-216-833-11	METAL CHIP	10K	5%	1/16W
R465	1-216-833-11	METAL CHIP	10K	5%	1/16W
R466	1-216-833-11	METAL CHIP	10K	5%	1/16W
R467	1-216-833-11	METAL CHIP	10K	5%	1/16W
R468	1-216-833-11	METAL CHIP	10K	5%	1/16W
R470	1-216-809-11	METAL CHIP	100	5%	1/16W
R471	1-216-809-11	METAL CHIP	100	5%	1/16W
R472	1-216-833-11	METAL CHIP	10K	5%	1/16W
R473	1-216-809-11	METAL CHIP	100	5%	1/16W
R474	1-216-809-11	METAL CHIP	100	5%	1/16W
R475	1-216-809-11	METAL CHIP	100	5%	1/16W
R476	1-216-809-11	METAL CHIP	100	5%	1/16W
R477	1-216-809-11	METAL CHIP	100	5%	1/16W
R478	1-216-809-11	METAL CHIP	100	5%	1/16W
R479	1-216-809-11	METAL CHIP	100	5%	1/16W
R480	1-216-809-11	METAL CHIP	100	5%	1/16W
R481	1-216-809-11	METAL CHIP	100	5%	1/16W
R482	1-216-809-11	METAL CHIP	100	5%	1/16W
R483	1-216-809-11	METAL CHIP	100	5%	1/16W
R484	1-216-809-11	METAL CHIP	100	5%	1/16W
R485	1-216-809-11	METAL CHIP	100	5%	1/16W
R486	1-216-809-11	METAL CHIP	100	5%	1/16W
R487	1-216-809-11	METAL CHIP	100	5%	1/16W
R488	1-216-864-91	SHORT	0 (CL1)		
R488	1-216-815-11	METAL CHIP	330	5%	1/16W (CL3)
R489	1-216-809-11	METAL CHIP	100	5%	1/16W
R490	1-216-809-11	METAL CHIP	100	5%	1/16W
R491	1-216-809-11	METAL CHIP	100	5%	1/16W
R492	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (CL3)
R493	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (CL1:US)
R493	1-216-864-11	SHORT	0 (CL1:AEP,UK/CL3:AEP,UK)		
R493	1-216-821-11	METAL CHIP	1K	5%	1/16W (CL1:E,MX/CL3:MX)
R494	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (CL1:US,E,MX/CL3:MX)
R494	1-216-864-11	SHORT	0 (CL1:AUS,TW,KR/CL3:KR)		
R495	1-216-814-11	METAL CHIP	270	5%	1/16W
R496	1-216-833-11	METAL CHIP	10K	5%	1/16W
R497	1-216-814-11	METAL CHIP	270	5%	1/16W
R499	1-216-833-11	METAL CHIP	10K	5%	1/16W
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W
R502	1-216-841-11	METAL CHIP	47K	5%	1/16W
R503	1-216-841-11	METAL CHIP	47K	5%	1/16W
R505	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R506	1-216-817-11	METAL CHIP	470	5%	1/16W
R520	1-216-809-11	METAL CHIP	100	5%	1/16W
R521	1-216-839-11	METAL CHIP	33K	5%	1/16W
R543	1-216-864-11	SHORT	0		
R544	1-216-864-11	SHORT	0		
R562	1-216-833-11	METAL CHIP	10K	5%	1/16W
R563	1-216-833-11	METAL CHIP	10K	5%	1/16W
R570	1-216-809-11	METAL CHIP	100	5%	1/16W
R571	1-216-839-11	METAL CHIP	33K	5%	1/16W
R580	1-216-833-11	METAL CHIP	10K	5%	1/16W
R581	1-216-833-11	METAL CHIP	10K	5%	1/16W
R582	1-216-833-11	METAL CHIP	10K	5%	1/16W
		< VARIABLE RESISTOR >			
RV301	1-241-764-11	RES, ADJ, CARBON 10K			
RV351	1-241-764-11	RES, ADJ, CARBON 10K			

Ref. No.	Part No.	Description			Remarks
		< SWITCH >			
S501	1-771-264-11	SWITCH, PUSH(DETECTION)(1 KEY)			
		< VIBRATOR >			
X401	1-567-098-41	VIBRATOR, CRYSTAL 32.768kHz			
X402	1-781-107-21	VIBRATOR, SERAMIC 16MHz			
**********					
	1-678-461-11	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C721	1-162-306-11	CERAMIC	0.01uF	30.00% 16V	
**********					
	A-4475-428-A	PANEL BOARD, COMPLETE			
		**********			
C701	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C702	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C703	1-164-159-11	CERAMIC	0.1uF	50V	
C706	1-162-282-31	CERAMIC	100PF	10% 50V	
C707	1-162-290-31	CERAMIC	470PF	10% 50V	
C708	1-162-282-31	CERAMIC	100PF	10% 50V	
C710	1-162-306-11	CERAMIC	0.01uF	30% 16V	
C711	1-164-159-11	CERAMIC	0.1uF	50V	
C712	1-126-791-11	ELECT	10uF	20% 16V	
C713	1-162-306-11	CERAMIC	0.01uF	30% 16V	
C714	1-162-306-11	CERAMIC	0.01uF	30% 16V	
C715	1-162-306-11	CERAMIC	0.01uF	30% 16V	
C720	1-162-282-31	CERAMIC	100PF	10% 50V	
C721	1-162-282-31	CERAMIC	100PF	10% 50V	
C722	1-162-282-31	CERAMIC	100PF	10% 50V	
C723	1-162-282-31	CERAMIC	100PF	10% 50V	
C724	1-162-282-31	CERAMIC	100PF	10% 50V	
C741	1-119-941-91	ELECT	470uF	20% 6.3V	
C742	1-119-941-91	ELECT	470uF	20% 6.3V	
C791	1-164-159-11	CERAMIC	0.1uF	50V	
C793	1-126-964-11	ELECT	10uF	20% 50V	
C794	1-164-159-11	CERAMIC	0.1uF	50V	
		< CONNECTOR >			
CN701	1-793-767-11	CONNECTOR, BOARD TO BOARD 30P			
CN703	1-568-951-11	PIN, CONNECTOR 2P			
CN704	1-580-471-11	SOCKET, CONNECTOR 6P			
		< DIODE >			
D701	8-719-812-44	DIODE SEL5220S-TP15			
D702	8-719-911-19	DIODE 1SS133T-72			
D703	8-719-024-99	DIODE 11ES2-NTA2B			
D712	8-719-058-04	DIODE SEL5223S-TP15			
D741	8-719-057-97	DIODE SEL5923A-TP15			
D743	8-719-057-97	DIODE SEL5923A-TP15			
D745	8-719-057-97	DIODE SEL5923A-TP15			
D746	8-719-911-19	DIODE 1SS133T-72			
		< EARTH >			
* EP701	1-537-738-21	TERMINAL, EARTH			
* EP702	1-537-738-21	TERMINAL, EARTH			

Ref. No.	Part No.	Description			Remarks
		< FERRITE BEAD >			
FB703	1-412-473-21	INDUCTOR	0UH		
		< IC >			
IC702	8-749-011-05	IC GP1U28X			
		< JACK >			
J701	1-691-293-21	JACK (PHONES)			
		< TRANSISTOR >			
Q701	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q702	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q741	8-729-049-79	TRANSISTOR	RT1P137S-TP		
Q742	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q743	8-729-049-79	TRANSISTOR	RT1P137S-TP		
Q744	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q745	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
Q746	8-729-029-66	TRANSISTOR	DTC114ESA-TP		
		< RESISTOR >			
R701	1-249-417-11	CARBON	1K	5% 1/4W	F
R702	1-249-429-11	CARBON	10K	5% 1/4W	
R703	1-249-429-11	CARBON	10K	5% 1/4W	
R705	1-247-807-31	CARBON	100	5% 1/4W	
R706	1-247-807-31	CARBON	100	5% 1/4W	
R707	1-247-807-31	CARBON	100	5% 1/4W	
R708	1-247-807-31	CARBON	100	5% 1/4W	
R709	1-247-807-31	CARBON	100	5% 1/4W	
R710	1-247-807-31	CARBON	100	5% 1/4W	
R711	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R712	1-247-843-11	CARBON	3.3K	5% 1/4W	
R713	1-249-422-11	CARBON	2.7K	5% 1/4W	F
R714	1-249-420-11	CARBON	1.8K	5% 1/4W	F
R715	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R716	1-249-417-11	CARBON	1K	5% 1/4W	F
R717	1-249-415-11	CARBON	680	5% 1/4W	F
R718	1-249-414-11	CARBON	560	5% 1/4W	F
R719	1-249-413-11	CARBON	470	5% 1/4W	F
R720	1-249-411-11	CARBON	330	5% 1/4W	
R722	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R723	1-249-417-11	CARBON	1K	5% 1/4W	F
R724	1-249-415-11	CARBON	680	5% 1/4W	F
R725	1-249-414-11	CARBON	560	5% 1/4W	F
R726	1-249-413-11	CARBON	470	5% 1/4W	F
R727	1-249-411-11	CARBON	330	5% 1/4W	
R729	1-247-843-11	CARBON	3.3K	5% 1/4W	
R730	1-249-422-11	CARBON	2.7K	5% 1/4W	F
R731	1-249-420-11	CARBON	1.8K	5% 1/4W	F
R732	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R733	1-249-417-11	CARBON	1K	5% 1/4W	F
R734	1-249-415-11	CARBON	680	5% 1/4W	F
R735	1-249-414-11	CARBON	560	5% 1/4W	F
R736	1-249-413-11	CARBON	470	5% 1/4W	F
R738	1-249-409-11	CARBON	220	5% 1/4W	F
R740	1-249-411-11	CARBON	330	5% 1/4W	

PANEL **RING SWITCH** **SUB POWER** **TC**

Ref. No.	Part No.	Description			Remarks
R742	1-249-406-11	CARBON	120	5%	1/4W F
R744	1-249-406-11	CARBON	120	5%	1/4W F
R746	1-249-406-11	CARBON	120	5%	1/4W F
R747	1-249-429-11	CARBON	10K	5%	1/4W
R748	1-247-807-31	CARBON	100	5%	1/4W
R749	1-247-807-31	CARBON	100	5%	1/4W
R793	1-247-807-31	CARBON	100	5%	1/4W
R794	1-247-807-31	CARBON	100	5%	1/4W
R795	1-247-807-31	CARBON	100	5%	1/4W
R796	1-249-425-11	CARBON	4.7K	5%	1/4W F
R797	1-249-417-11	CARBON	1K	5%	1/4W F
		< SWITCH >			
S701	1-762-875-21	SWITCH, KEYBOARD (POWER)			
S706	1-473-392-11	ENCODER, ROTARY (VOLUME)			
S707	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S711	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S712	1-762-875-21	SWITCH, KEYBOARD (REC)			
S713	1-762-875-21	SWITCH, KEYBOARD (EDIT)			
S714	1-762-875-21	SWITCH, KEYBOARD (DBFB)			
S715	1-762-875-21	SWITCH, KEYBOARD (STOP)			
S716	1-762-875-21	SWITCH, KEYBOARD (CD PLAY)			
S717	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)			
S718	1-762-875-21	SWITCH, KEYBOARD (GROOVE)			
S719	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE/DIRECTION)			
S720	1-762-875-21	SWITCH, KEYBOARD (REPEAT STEREO/MONO)			
S721	1-762-875-21	SWITCH, KEYBOARD (DIMMER)			
S722	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
S723	1-762-875-21	SWITCH, KEYBOARD (TAPE PLAY)			
S724	1-762-875-21	SWITCH, KEYBOARD (MD/VIDEO)			
S741	1-762-875-21	SWITCH, KEYBOARD (CD1)			
S742	1-762-875-21	SWITCH, KEYBOARD (CD1 EJECT)			
S743	1-762-875-21	SWITCH, KEYBOARD (CD2)			
S744	1-762-875-21	SWITCH, KEYBOARD (CD2 EJECT)			
S745	1-762-875-21	SWITCH, KEYBOARD (CD3)			
S746	1-762-875-21	SWITCH, KEYBOARD (CD3 EJECT)			
S747	1-762-875-21	SWITCH, KEYBOARD (LEFT)			
S748	1-762-875-21	SWITCH, KEYBOARD (UP)			
S749	1-762-875-21	SWITCH, KEYBOARD (RIGHT)			
S750	1-762-875-21	SWITCH, KEYBOARD (DOWN)			

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	1-679-982-11	RING SWITCH BOARD			
		**********			
		< RESISTOR >			
R791	1-249-427-11	CARBON	6.8K	5%	1/4W F
R792	1-249-425-11	CARBON	4.7K	5%	1/4W F
		< SWITCH >			
S791	1-786-084-11	SWITCH, DETECTION			

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	1-680-257-11	SUB POWER BOARD			
		**********			
		< CAPACITOR >			
⚠C911	1-113-925-11	CERAMIC	0.01uF	20%	250V
C912	1-126-768-11	ELECT	2200uF	20%	16V
C913	1-124-584-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN911	1-564-321-00	PIN, CONNECTOR 2P			
		< DIODE >			
⚠D911	8-719-911-19	DIODE 1SS133T-72			
D912	8-719-024-99	DIODE 11ES2-NTA2B			
D913	8-719-024-99	DIODE 11ES2-NTA2B			
D914	8-719-024-99	DIODE 11ES2-NTA2B			
D915	8-719-024-99	DIODE 11ES2-NTA2B			
		< IC >			
IC911	8-759-158-62	IC TA78057S			
		< TRANSISTOR >			
Q911	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R911	1-249-429-11	CARBON	10K	5%	1/4W
R912	1-249-441-11	CARBON	100K	5%	1/4W
R913	1-249-401-11	CARBON	47	5%	1/4W F
		< RELAY >			
⚠RY911	1-755-276-11	RELAY, POWER			
		< TRANSFORMER >			
⚠T911	1-435-849-11	TRANSFORMER, POWER (CL1:US)			
⚠T911	1-435-850-11	TRANSFORMER, POWER (CL1:AEP,UK/CL3:AEP,UK)			
⚠T911	1-435-851-11	TRANSFORMER, POWER (CL1:AUS,E,MX,TW,KR/CL3:MX,KR)			

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	A-4476-076-A	TC BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C129	1-126-964-11	ELECT	10uF	20%	50V
C326	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C327	1-104-665-11	ELECT	100uF	20%	10V
C328	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C329	1-130-483-00	MYLAR	0.01uF	5%	50V
C330	1-126-964-11	ELECT	10uF	20%	50V
C331	1-126-965-11	ELECT	22uF	20%	50V
C332	1-137-427-11	MYLAR	120PF	5%	50V
C333	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C334	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C335	1-137-150-11	MYLAR	0.01uF	5%	100V
C336	1-126-961-11	ELECT	2.2uF	20%	50V
C337	1-130-485-00	MYLAR	0.015uF	5%	50V
C338	1-130-481-00	MYLAR	0.0068uF	5%	50V
C339	1-130-481-00	MYLAR	0.0068uF	5%	50V
C340	1-130-486-00	MYLAR	0.018uF	10%	50V
C341	1-126-960-11	ELECT	1uF	20%	50V
C342	1-104-664-11	ELECT	47uF	20%	16V
C376	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C377	1-104-665-11	ELECT	100uF	20%	10V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
C378	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C379	1-130-483-00	MYLAR	0.01uF	5%	50V
C380	1-126-964-11	ELECT	10uF	20%	50V
C381	1-126-965-11	ELECT	22uF	20%	50V
C382	1-137-427-11	MYLAR	120PF	5%	50V
C383	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C384	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
		< IC >			
IC302	8-759-143-54	IC uPC1330HA			
IC304	8-759-656-83	IC NJM4580MD-TE			
		< COIL >			
L301	1-410-780-11	INDUCTOR	27MH		
L351	1-410-780-11	INDUCTOR	27MH		
		< TRANSISTOR >			
Q301	8-729-801-93	TRANSISTOR	2SD1387-34-TP		
Q302	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q303	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q304	8-729-027-31	TRANSISTOR	DTA124EKA-T146		
Q305	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R336	1-216-846-11	METAL CHIP	120K	5%	1/16W
R337	1-216-813-11	METAL CHIP	220	5%	1/16W
R338	1-216-837-11	METAL CHIP	22K	5%	1/16W
R339	1-216-834-11	METAL CHIP	12K	5%	1/16W
R340	1-216-850-11	METAL CHIP	270K	5%	1/16W
R341	1-216-813-11	METAL CHIP	220	5%	1/16W
R342	1-216-834-11	METAL CHIP	12K	5%	1/16W
⚠R343	1-219-787-17	FUSIBLE	5.6	5%	1/4W
⚠R344	1-219-787-17	FUSIBLE	5.6	5%	1/4W
R345	1-216-836-11	METAL CHIP	18K	5%	1/16W
R346	1-216-836-11	METAL CHIP	18K	5%	1/16W
R347	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R348	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R349	1-216-821-11	METAL CHIP	1K	5%	1/16W
R386	1-216-846-11	METAL CHIP	120K	5%	1/16W
R387	1-216-813-11	METAL CHIP	220	5%	1/16W
R388	1-216-837-11	METAL CHIP	22K	5%	1/16W
R389	1-216-834-11	METAL CHIP	12K	5%	1/16W
R390	1-216-850-11	METAL CHIP	270K	5%	1/16W
R391	1-216-864-91	SHORT	0		
R392	1-216-834-11	METAL CHIP	12K	5%	1/16W
R393	1-216-837-11	METAL CHIP	22K	5%	1/16W
R394	1-216-813-11	METAL CHIP	220	5%	1/16W
R396	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R397	1-216-821-11	METAL CHIP	1K	5%	1/16W
R398	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
		< VARIABLE RESISTOR >			
RV304	1-241-768-11	RES, ADJ, CARBON 220K			
RV354	1-241-768-11	RES, ADJ, CARBON 220K			
		< TRANSFORMER >			
T301	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

****

Ref. No.	Part No.	Description			Remarks
	1-680-270-11	THERMAL BOARD			
		**********			
		< CONNECTOR >			
CN803	1-568-951-11	PIN, CONNECTOR 2P			
		< THERMISTOR(POSITIVE) >			
THP842	1-807-796-11	THERMISTOR			

****

	1-680-256-11	TRANS BOARD			
		**********			
	1-533-217-11	HOLDER, FUSE			
		< CAPACITOR >			
C901	1-136-165-00	FILM	0.1uF	5%	50V (CL1)
C901	1-130-777-00	MYLAR	0.1uF	5%	100V (CL3)
C902	1-136-165-00	FILM	0.1uF	5%	50V (CL1)
C902	1-130-777-00	MYLAR	0.1uF	5%	100V (CL3)
C931	1-164-159-11	CERAMIC	0.1uF		50V (CL3)
		< CONNECTOR >			
CN901	1-564-321-00	PIN, CONNECTOR 2P			(CL1:US,AEP,UK,AUS,MX,KR/CL3)
* CN902	1-564-523-11	PLUG, CONNECTOR 8P			
* CN903	1-568-941-11	PIN, CONNECTOR 3P (CL3)			
* CN904	1-564-518-11	PLUG, CONNECTOR 3P (CL3)			
		< DIODE >			
D901	8-719-028-23	DIODE D3SBA20-4101 (CL1)			
D901	8-719-510-68	DIODE D5SBA204101 (CL3)			
		< FUSE >			
⚠F901	1-533-451-11	FUSE, GLASS TUBE (DIA.5) 3.15A/125V(CL1:US)			
⚠F901	1-533-466-11	FUSE, GLASS TUBE (DIA.5) 1.25A/250V (CL1:AEP,UK)			
⚠F901	1-533-469-11	FUSE, GLASS TUBE (DIA.5) 2.5A/250V (CL1:E,MX,TW/CL3:AEP,UK)			
⚠F901	1-533-471-11	FUSE, GLASS TUBE (DIA.5) 4A/250V(CL3:MX)			
⚠F902	1-533-466-11	FUSE, GLASS TUBE (DIA.5) 1.25A/250V (CL1:E,TW,KR/CL3:KR)			
⚠F903	1-533-465-11	FUSE, GLASS TUBE (DIA.5) 1A/250V (CL1:AUS,E,TW)			
		< TRANSISTOR >			
Q931	8-729-119-78	TRANSISTOR	2SC2785TP-HFE (CL3)		
Q932	8-729-140-04	TRANSISTOR	2SB1116-TP-LK (CL3)		

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

TRANS **TRAY SENSOR** **VOL SEL**

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
⚠R901	1-219-119-81	FUSIBLE	0.1	5% 1/4W	(CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)
⚠R901	1-219-120-11	FUSIBLE	0.15	5% 1/4W	(CL1:AEP,UK/CL3:AEP,UK)
⚠R902	1-219-119-81	FUSIBLE	0.1	5% 1/4W	(CL1:US,AUS,E,MX,TW,KR/CL3)
⚠R902	1-219-120-11	FUSIBLE	0.15	5% 1/4W	(CL1:AEP,UK)
R903	1-219-237-91	SOLID	3.3M	20% 1/2W	(CL1:US)
R931	1-249-421-11	CARBON	2.2K	5% 1/4W F	(CL3)
**********					
	1-678-457-11	TRAY SENSOR BOARD			
		**********			
		< CAPACITOR >			
C731	1-164-159-11	CERAMIC	0.1uF	50V	
		< IC >			
IC731	8-749-081-01	PHOTO SENSOR DG-264			
IC732	8-749-081-01	PHOTO SENSOR DG-264			
IC733	8-749-081-01	PHOTO SENSOR DG-264			
		< RESISTOR >			
R731	1-247-876-11	CARBON	75K	5% 1/4W	
R732	1-249-408-11	CARBON	180	5% 1/4W F	
R733	1-247-876-11	CARBON	75K	5% 1/4W	
R734	1-249-408-11	CARBON	180	5% 1/4W F	
R735	1-247-876-11	CARBON	75K	5% 1/4W	
R736	1-249-408-11	CARBON	180	5% 1/4W F	
**********					
	1-680-258-11	VOL SEL BOARD (CL1:E,TW)			
		**********			
		< CONNECTOR >			
CN941	1-568-106-11	PIN, CONNECTOR 4P			
CN942	1-564-321-00	PIN, CONNECTOR 2P			
CN943	1-774-108-11	PIN, CONNECTOR (PC BOARD)			

Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S943	1-786-055-11	SELECTOR, VOLTAGE (VOLTAGE SELECTOR)	
**********			
		MISCELLANEOUS	
		**********	
5	1-769-910-11	WIRE (FLAT TYPE) (9 CORE)	
6	1-693-530-81	TUNER (FM/AM) (CL1:US)	
6	1-693-531-81	TUNER (FM/AM) (CL1:AUS,MX,TW/CL3:MX)	
6	1-693-529-41	TUNER (FM/AM) (CL1:AEP,UK/CL3:AEP,UK)	
6	1-693-537-81	TUNER (CL1:E)	
6	1-693-538-81	TUNER (CL1:KR/CL3:KR)	
7	1-769-944-11	WIRE (FLAT TYPE) (11 CORE)	(CL1:US,AUS,E,MX,TW,KR/CL3:MX,KR)
7	1-773-008-11	WIRE (FLAT TYPE) (15 CORE)	(CL1:AEP,UK/CL3:AEP,UK)
11	1-763-072-11	FAN, D.C. (CL3)	
60	1-804-260-11	DISPLAY PANEL, LIQUID CRYSTAL	
109	1-769-079-21	CORD, POWER (CL1:KR/CL3:KR)	
109	1-777-071-81	CORD, POWER (CL1:AEP,E,TW/CL3:AEP)	
109	1-783-203-11	CORD, POWER (CL1:AUS)	
109	1-783-532-11	CORD, POWER (CL1:US)	
109	1-790-226-11	CORD, POWER (CL1:UK/CL3:UK)	
109	1-791-901-11	CORD, POWER (CL1:MX/CL3:MX)	
112	1-569-008-21	ADAPTOR, CONVERSION (CL1:E,TW)	
⚠T901	1-435-808-11	TRANSFORMER, POWER (CL3:AEP,UK)	
⚠T901	1-435-809-11	TRANSFORMER, POWER (CL3:MX,KR)	
⚠T901	1-435-829-11	TRANSFORMER, POWER (CL1:AEP,UK)	
⚠T901	1-435-830-11	TRANSFORMER, POWER (CL1:US)	
⚠T901	1-435-831-11	TRANSFORMER, POWER (CL1:AUS,MX,TW,KR)	
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-872-09	SCREW +BVTT 3X8 (S)	
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#4	7-685-881-09	SCREW +BVTT 4X8 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SS-SCL1/SCL1B/SCL3/SCL5

SERVICE MANUAL

Ver 1.0 2001. 02

US Model
SS-SCL1/SCL1B
AEP Model
UK Model
E Model
SS-SCL1/SCL3/SCL5
Australian Model
SS-SCL1/SCL5

Photo : SS-SCL1 (Rch)

- This set is the speaker system in CHC-CL1/CL3/CL5MD.

SPECIFICATIONS

Speaker system	2-way,bass-reflex type
Speaker units	
Woofer:	17 cm dia.,cone type
Tweeter:	5 cm dia.,cone type
Nominal impedance	6 ohms

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

9-929-585-11
2001B1600-1
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Sony Corporation
Audio Entertainment Group
General Engineering Dept.

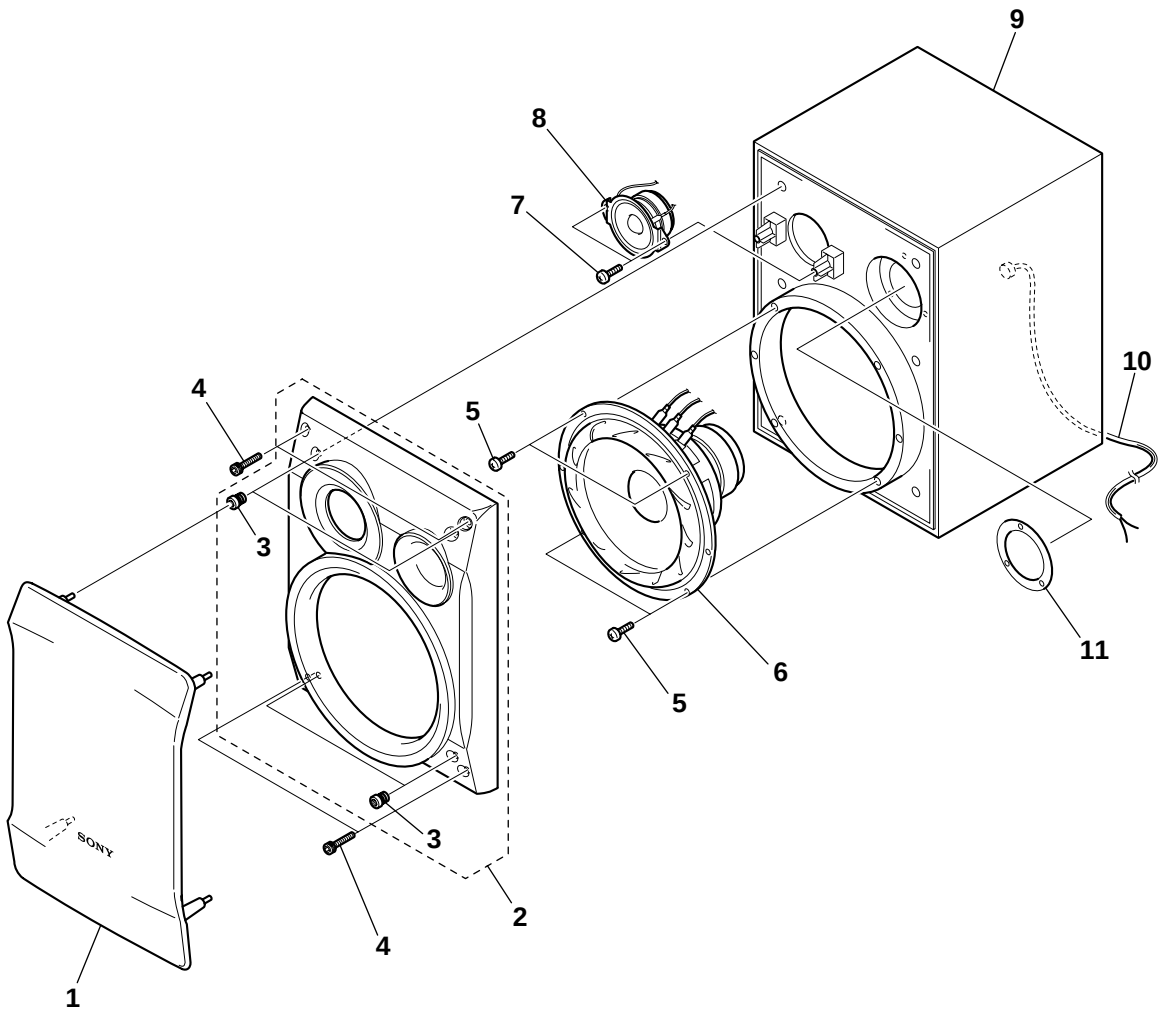
SONY®

EXPLODED VIEW AND PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  AUS : Australian model.
  MX : Mexican model.
  KR : Korea model.
  TW : Taiwan model.
  HK : Hong Kong model.

Lch



Ref. No.	Part No.	Description	Remarks
1	A-4412-706-A	FRAME ASSY, GRILLE (SCL1/SCL5)	
1	A-4412-808-A	FRAME ASSY, GRILLE (SCL1B/SCL3)	
2	A-4412-704-A	PANEL (L) ASSY, FRONT (Lch)(SCL1/SCL5)	
2	A-4412-705-A	PANEL (R) ASSY, FRONT (Rch)(SCL1/SCL5)	
2	A-4412-707-A	PANEL (L) ASSY, FRONT (Lch)(SCL1B/SCL3)	
2	A-4412-708-A	PANEL (R) ASSY, FRONT (Rch)(SCL1B/SCL3)	
* 3	4-963-075-01	CATCHER	
4	4-232-226-01	SCREW, HEXAGON SOCKET TAPPING	
5	4-874-614-11	SCREW (4) (3.5X14), TAPPING	
6	1-529-953-11	SPEAKER (16cm)(WOOFER)	(SCL1/SCL1B/SCL5)
6	1-529-955-11	SPEAKER (16cm)(WOOFER)(SCL3)	
7	4-982-502-01	SCREW (A TYPE) (M3.5), TAPPING	
8	1-529-952-11	SPEAKER (5cm)(TWEETER)	(SCL1/SCL1B/SCL5)
8	1-529-954-11	SPEAKER (5cm)(TWEETER)(SCL3)	

Ref. No.	Part No.	Description	Remarks
9	A-4412-677-A	CABINET (L) ASSY, SPEAKER (Lch)	(SCL1:US,AUS,E,MX,KR,TW/SCL5:AUS,HK)
9	A-4412-678-A	CABINET (R) ASSY, SPEAKER (Rch)	(SCL1:US,AUS,E,MX,KR,TW/SCL5:AUS,HK)
9	A-4412-716-A	CABINET (L) ASSY, SPEAKER (Lch)	(SCL1B/SCL3:US,KR)
9	A-4412-717-A	CABINET (R) ASSY, SPEAKER (Rch)	(SCL1B/SCL3:US,KR)
9	A-4412-786-A	CABINET (L) ASSY, SPEAKER (Lch)	(SCL1:AEP,UK/SCL5:AEP,UK)
9	A-4412-787-A	CABINET (R) ASSY, SPEAKER (Rch)	(SCL1:AEP,UK/SCL5:AEP,UK)
9	A-4412-788-A	CABINET (L) ASSY, SPEAKER (Lch)	(SCL3:AEP,UK)
9	A-4412-789-A	CABINET (R) ASSY, SPEAKER (Rch)	(SCL3:AEP,UK)
10	1-757-526-11	CORD, CONNECTION	
11	4-218-300-01	PACKING (B)	

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.02	New